Well, as I write this the third weekend of May, and Spring is in full bloom. The weather is definitely getting warmer!

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

In the last quarter, PUPID has had 17 new members and is up from 213 to 216 members; but we have 22 members that are in active grace status.

In this Spring "Logger" newsletter, I am pleased to include "Coating Rheology: A review and recent work" by Lisa Weeks and Doug Bousfield of the University of Maine and "Innovating for Success with Project Management Principles" by Jay Stockard of Fisher & Arnold; both Presented at the 2018 TAPPI PaperCon April 15 – 18 conference in Charlotte, NC and "U.S. Industry Development and Current Personnel Implications: An Update" by Jay Stockard of Fisher & Arnold Presented at the 2017 TAPPI PaperCon April 23 – 26 conference in Minneapolis, MN. You can see the presentations by clicking on the link on page 17.

We are in the midst of programming for the 5th Annual 2018 Process Control & Safety Symposium again to be held at the Westin Memorial City in Houston this upcoming October 30 - November 1.

We had a record number of applicants for this years’ PUPID scholarship; and Western Michigan’s Andrew Kathan was selected to receive the $2000. Andrew & last years recipient, Garrett Fisher, are both at Formtar’s Port Huron mill this summer. Read the announcement on page 18.

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.
1. At 433 degrees F, a type J thermocouple with a 32 degree F reference junction (ice bath) will produce an output in millivolts that is most nearly to:
   a. 9.04
   b. 10.51
   c. 12.05
   d. 17.79

2. Which of the following practices is important in routing optic cable?
   a. Laying cable in trays with high-horsepower motor wiring should be avoided.
   b. Conduit fittings that require small radius bends should be avoided.
   c. Overhead runs on messenger wires should be limited to 75 feet.
   d. Underground fiber optic runs must be covered with concrete.

3. The plant has 3 pumps fail in 7 years. What is the failure rate (FR) of the pumps in hours?
   a. 4.89 x 10^{-5}
   b. 4.29 x 10^{-4}
   c. 4.89 x 10^{-4}
   d. 1.14 x 10^{-3}

4. Which of the following types of control systems is normally programmed in ladder logic?
   a. Programmable logic controllers (PLCs)
   b. Distributed control systems (DCSs)
   c. Single loop digital controllers
   d. Supervisory Control and Data Acquisition (SCADA)

5. Which of the following types of valves has the highest gain when the valve is nearly closed?
   a. Quick opening
   b. Equal percentage
   c. Fail open
   d. Linear

Find the answers to these questions on page 22 & 23.
**WELCOME TO THE 17 NEW ISA PULP & PAPER INDUSTRY DIVISION MEMBERS**

- Geoffrey Mallett
- Jacob Reid
- Matt Waid
- Ross Walker
- Nicole Gouhin
- Jeremy R Mitchell
- Bruce Smith
- Brunda Kalyana Babu
- Essam Abounokirah
- Rebeca Saraí Hernández Zaldaña
- Jake Faebler
- Allen Larocque
- Liz Densmore
- Gary Lambert, CCST
- David Dyck
- Franck Amiet
- Mark Daniels

**HERE’S A REMINDER TO THE 22 ISA PULP & PAPER INDUSTRY DIVISION MEMBERS WHO NEED TO RENEW THEIR MEMBERSHIP**

- Chris D. Bassett
- James E. Stahl
- John M. Beaudry, Jr.
- Keith A. Fischer
- Robert R. Shelton
- Jukka Ylijoki
- John P. Davison
- William T. Ridley
- Pekka Kormano
- Sathyanarayan Mohan, CAP
- Wendy Daray
- José Eduardo Balzani Júnior
- Mikhail Iaronka Menezes
- Francisco Soto
- Maggie McCoy
- Fábio Miki
- Vijayan Raju
- Aaron Colby
- Andrew Hanes
- Chris Wilson
- Max Leach
- Tom Driedger

**DON’T FORGET TO RENEW!**

**CCST question**

All electrical power and other paths must be eliminated when measuring ______ of an electrical component.

A. capacitance  
B. resistance  
C. voltage  
D. current

**CAP question**

A project manager prepares a work breakdown structure (WBS) identifying each major task and related subtasks required to fulfill the project objective. Subtasks are further reduced into units and subunits with associated cost projects and assigned responsibilities. This activity occurs during which phase of a project’s life cycle in the ISA CAP program’s model?

A. Project definition  
B. Feasibility study  
C. System design  
D. Software development

See page 21 for the answers to the CCST and CAP questions
Metsä Fibre launches prefeasibility study on renewal of Kemi pulp mill in Finland

May 03, 2018 - 05:36

ESPOO, Finland, May 3, 2018 (Press Release) - Metsä Fibre, part of Metsä Group, has launched a prefeasibility study on renewal of Kemi pulp mill.

In the prefeasibility study Metsä Fibre is investigating two options:

▪ Replacing completely the current pulp mill with a new bioproduct mill. Compared to the current mill, the new mill would be clearly larger in terms of production capacity, consumption of wood raw material and impact on employment. The self-sufficiency in electricity would be considerably raised and the bioproduct range would be expanded.

▪ Extending the life cycle of the current mill by modernising several departments and maintaining production capacity and wood consumption largely unchanged.

“The shift from fossil-based economy towards sustainable bioeconomy is accelerating. The forest industry and Metsä Group have a significant role in this development. In the launched study, we will evaluate the preconditions for a very significant investment in Kemi, Finland,” says Metsä Group’s President and CEO Ilkka Hämälä.

The prefeasibility study examines in particular the availability of wood raw material and the development potential of Kemi’s industrial infrastructure and logistic connections. The study phase is expected to continue until the summer 2019, when decisions on a possible launch of the environmental impact assessment (EIA) and environmental permit procedures would be made. The prefeasibility study is led by Timo Merikallio, M.Sc. (Eng.) who was responsible for the planning and construction of Metsä Group’s bioproduct mill, the largest forest industry investment in Europe, which started up in August 2017 in Äänekoski, Finland.

Metsä Fibre produces softwood and hardwood pulp in the Kemi integrate mainly for raw material for tissue paper and kraftliner, and Metsä Board, also part of Metsä Group, produces high-quality kraftliners for packaging end-uses. The kraftliner production, the annual capacity of which is approximately 420,000 tonnes is highly competitive, and its capacity and product quality have been developed with continuous investments.

Kemi’s pulp mill's current annual production capacity of softwood and hardwood pulp is approximately 620,000 tonnes. Annually the mill uses more than 3 million cubic metres of wood. The mill's self-sufficiency in electricity is nearly 145%. The pulp mill employs approximately 1,500 people in its direct value chain in Finland. The Kemi pulp mill has been rebuilt in stages, and its technology is mainly from the 1980s. The pulp mill has significant investment needs over the next decade.

Metsä Fibre is owned by Metsä Group’s parent company Metsäliitto Cooperative (50.1%), Itochu Corporation (25.0%) and Metsä Board Corporation (24.9%).
WHO’S DOIN’ ANYTHING? (CONTINUED)

Metsä Group is a forerunner in sustainable bioeconomy utilising renewable wood from sustainably managed northern forests. Metsä Group focuses on wood supply and forest services, wood products, pulp, fresh fibre paperboards and tissue and cooking papers. Metsä Group’s sales totalled EUR 5.0 billion in 2017, and it employs approximately 9,100 people. The Group operates in nearly 30 countries. Metsälitto Cooperative is the parent company of Metsä Group and is owned by approximately 104,000 Finnish forest owners.

UPM to invest Euro 149 million at mills in Germany and China

HELSINKI, (Press Release) - As the world leader in label papers, UPM continues to grow in the attractive release liner segments to support its customers globally. Steady growth is expected to continue in all markets driven by favourable economic conditions and strong increase in specialty paper demand for labelling, packaging and e-commerce as well as in medical and hygiene applications. To strengthen its position UPM will rebuild paper machine 2 at its Nordland mill in Dörpen, Germany and convert it from fine paper to glassine paper production. The machine will be equipped with new finishing equipment and starts producing glassine paper as of Q4 2019. The planned capacity after the rebuild will be 110,000 tonnes per year. The total investment in Nordland is EUR 116 million. The production of woodfree papers on PM2 in Nordland will continue until Q3 2019 and the machine will be producing both glassine and woodfree paper during the ramp-up phase.

UPM has also decided to further increase the release liner base paper capacity at UPM Changshu mill in China. Since the successful startup of the paper machine 3 in Changshu, UPM has established a strong position in the label paper segment in Asia. By installing a second supercalender on paper machine 3, there will be an additional capacity of more than 40,000 tons of glassine paper a year as of Q1 2020. The total investment in Changshu is EUR 33 million.

“We see strong growth in all our market segments and we are committed to be part of the growth. The planned investments in Nordland and Changshu, along with the earlier announced calender investment at our Jämsänkoski mill, will increase customer confidence in their global growth in release liner applications. The planned installations will also enable increased specialisation of our assets. Thus we can improve our operational efficiency and strengthen supply security,” says Bernd Eikens, Executive Vice President of UPM Specialty Papers.

UPM Specialty Papers

UPM Specialty Papers produces labelling and packaging materials to global markets and fine papers to Asian markets. Its main customers are paper converters, distributors, retailers and printers. UPM Specialty Papers is a leader in sustainable development in the industry. Its high performance papers are produced in Finland and China. UPM Specialty Papers employs approximately 1,700 people in Finland, China, United States, Japan, South Korea, Singapore and Australia.

UPM

UPM leads the forest-based bioindustry into a sustainable, innovation-driven and exciting future across six business areas: UPM Biorefining, UPM Energy, UPM Raflatac, UPM Specialty Papers, UPM Communication Papers and UPM Plywood. UPM provides sustainable and safe solutions to the growing global consumption. Products are made of renewable and recyclable materials. The group employs around 19,100 people worldwide and its annual sales are approximately EUR 10 billion. UPM shares are listed on NASDAQ OMX Helsinki.
WHO’S DOIN’ ANYTHING? (CONTINUED)

Voith converts LEIPA’s newsprint PM 5 to packaging paper in Schwedt, Germany

- HEIDENHEIM, Germany, (Press Release) -
- Extensive rebuild and expansion of the existing machine
- One of the fastest machines for testliner
- Assembly of an efficient recovered paper processing line

In Schwedt, Voith has converted the LEIPA Group’s PM 5 from a newsprint to a packaging paper machine. On 19 April 2018, the acceptance and handover of the machine of the Schwedt PM 5 project was signed early at LEIPA Georg Leinfelder GmbH, with effect on 13 April. As a result, the Voith team on site managed to bring the entire machine, consisting of a BlueLine OCC stock preparation line, DIP stock preparation line and XcelLine paper machine up to handover quality just 19 days after ‘stock on wire’.

Perfectly matched components and an extensive automation system including OnQ quality control system make the machine a new benchmark in the industry. LEIPA can produce approximately 450,000 metric tons of white top testliner (WTTL) on the machine and is therefore the market leader in this segment. After taking over the UPM mill in Schwedt, the new owner, the LEIPA Group, decided to extensively rebuild the existing PM 11. Under the management of Voith, the conversion of the newsprint paper machine to a machine for the production of white top testliner (WTTL) began in October 2017. LEIPA invested over 160 million euros in the plant. Now known as PM 5, the machine is a new point of reference for packaging paper. Just a few machines worldwide surpass its 9,200-millimeter wire width. It also takes the top spot with its production speed of 1,200 meters per minute. LEIPA plans to produce 1,180 to 1,400 metric tons of white top testliner per day with the best surface properties and basis weights of 100 to 140 grams per square meter. LEIPA wants to manufacture a total of 450,000 metric tons of paper every year and thus expand its market position further.

Optimized for high speeds

To ensure the PM 5 can meet the desired output and quality requirements, Voith modified almost every component of the existing machine. A new hybrid former with two headboxes DuoFormer D and TopFormer F replaced the previous former, for example. Voith also developed a comprehensive solution for the transition to the press section and for the press, with a DuoCentri NipcoFlex shoe press in the center. These two components were designed to meet the requirements in high speed machines and enable outstanding product quality. Robust SolarPress roll covers assist in achieving this. The covers do not require any water cooling and help LEIPA to conserve resources. The SpeedSizer AT is also optimized for the uniform and faultless application of starch at high speeds.

During the rebuild, Voith separated the existing dryer section into a predryer and after-dryer section. In the process, the pre-dryer section received a completely new TopDuoRun dryer group, while existing components were used for the after-dryer section. Thanks to a new MasterReel reel and the rebuild of the two existing DuoRollers, reel diameters of up to 3.5 meters can now be produced on the PM 5. The existing machine hall ventilation system was also expanded and integrated into the new process and quality control system.

15,000 recorded signals ensure optimum paper quality

Some of the existing motors were also used after the conversion. However, the Voith team integrated more than 333 new motors of different sizes into the PM 5, the most powerful of which has a capacity of 1.5 megawatts.

Most of the motors are integrated into the automation concept developed by Voith. The system records more than 15,000 signals, monitors all the production steps from stock preparation to the reel, reports even the slightest deviations and levels out any fluctuations within a fraction of a second where needed. 29 state-of-the-art computer processors take care of processing the information. “The continuous data stream forms an important basis for us to maintain a consistently high paper quality at all times”, says Falk Friedrich, Plant Manager of LEIPA Schwedt Nord.

Increased efficiency for paper treatment

While the rebuild was taking place, a new machine for the efficient treatment of up to 1,400 metric tons of fiber from recovered paper per day was also built. With a length of 50 meters, a diameter of 4.5 meters and a total weight of about 200 metric tons, the IntensaDrum pulping drum is the largest Voith has supplied to date. Much of the existing deinking system (DIP) was retained. Voith
Who’s Doin’ Anything? (continued)

only had to modify it to cope with the characteristics of packaging papers. Among other measures, the technology group installed energy-saving components for bleach and flotation, which, along with the new cleaning system, reduce fiber losses.

“The engineers from Voith view the system from the apron conveyor to the winder, including measuring, automation and ventilation technology as a whole, and therefore develop perfectly compatible solutions”, emphasized Martin Kaltenegger, Project Manager for LEIPA PM 5.

Voith clothing for optimum performance

In addition, the order volume included start-up and a number of training sessions in which the LEIPA team became familiar with the intricacies of the PM 5. Voith will remain closely involved in the processes of the PM 5 after start-up too. In the next few years, the single-source supplier will deliver the clothing and doctor blades for the machine and thus ensure the optimum performance of the PM 5. The optimization of the machine within the first eight weeks after start-up is also part of the project – with an option to extend it for longer.

“The entire project, from the shutdown of the PM 11 to the installation of the new components and start-up of the new PM 5 has gone very well. With their professionalism and dedication, the two project teams have ensured the success of the project”, says Robert Osswald, Project Manager Voith Paper.

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, focusing on developing resource-conserving products to reduce the use of energy, water and fibers. Furthermore, Voith Paper offers a broad service portfolio for all sections of the paper manufacturing process.

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, 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.

Italy’s TMC to open new roll packaging and diaper packaging production plant in Brazil

BOLOGNA, Italy, April 27, 2018 (Press Release) - Thanks to this forma mentis, we have become the largest manufacturer of primary and secondary packaging for Tissue in the world. During our 20-year experience, we have solved thousands of packaging needs for our customers and guaranteed reliable solutions on which we keep building our innovation.

To us, innovating means exceeding the limits of the standard relationship between manufacturer and user. It means supporting you with a blend of machines and services, providing innovative solutions for your products, maximizing your investment today, reducing your total cost of ownership and preserving the value of the capital invested through time.

This is why we have decided to enhance our presence in Brazil with the opening of a new production plant that will be inaugurated on June 5th 2018.

An important step that allows us to offer Brazilian customers – and not only – all the support of a specialist capable of making the difference.

From June 5th to 7th 2018, TMC do Brasil opens its doors so you can experience its technology firsthand with the new Roll Packaging and Diaper Packaging lines and see its new organizational structure.

Sweden’s ÅF receives contract from Sappi to improve environmental footprint and expand capacity to 890,000 tonnes/yr of its Saiccor Mill in South Africa

STOCKHOLM, April 25, 2018 (Press Release) - ÅF has been awarded an engineering, procurement and construction management contract by Sappi Limited to improve the environmental footprint of the Saiccor Mill in South Africa and expand its capacity. The project is an equal effort joint venture between ÅF and the project, engineering and technical services company, Wood. The project is estimated to be 320 000 hours, which makes it the largest pulp and paper order ever secured by ÅF.

Saiccor Mill is situated south of the port of Durban and is the single largest producer of dissolving wood pulp, used in particular for viscose staple fibres in clothing and textiles.
WHO’S DOIN’ ANYTHING? (CONTINUED)

“South Africa is one of our strongest pulp and paper markets and this contract further strengthens our position as an international engineering and design company with focus on end-to-end projects and solutions”, says Mikael Fränckel, Head of Process Industry at ÅF.

The project will be executed by an international ÅF-Wood team with engineers and designers from South Africa, Sweden, Finland and Brazil.

Upon completion of the expansion, the production capacity will be 890,000 tons per annum of sulphite chemical cellulose as bleached alpha 92 pulp - used for production of viscose staple, filament and lyocell fibres.

The project is expected to be completed by Q3 – 2020.

ÅF AB
ÅF is an engineering and design company within the fields of energy, industry and infrastructure. We create sustainable solutions for the next generation through talented people and technology. We are based in Europe and our business and clients are found all over the world.

Monadnock Paper Mills introduces new Archival line of cotton and high alpha fiber papers and boards

BENNINGTON, NH, April 23, 2018 (Press Release) -Monadnock Paper Mills, Inc. (MPM), a family-owned manufacturer that delivers high-performance specialty papers for the technical, packaging and printing markets, introduces Monadnock Archival line of cotton and high alpha fiber papers and boards for printing, presentation and preservation of fine artworks, photographs and important documents.

- Archival Facing & Backing Papers
- Archival Mat & Mounting Boards
- Archival Liner Board & Mediums
- Coated Fine Art Inkjet/Giclee Papers
- Archival File Folder
- Fine Printing and Envelope Papers

Monadnock combines its fine printing and technical/specialty expertise to create high performance papers that meet ANSI longevity standards. These superior quality papers are groundwood-free, alkaline pH and lightfast (per Standard and Color Photo Activity Tests). Monadnock’s archival art and conservation papers and boards/solids meet ISO 9706 and ANSI Z 39.48-1992 (Permanence of Paper for Printed Library Materials) standards.

Monadnock had the tremendous honor of custom engineering museum-quality cotton printing papers for the renowned Heritage Edition of The Saint John’s Bible and the limited edition Prince of Wales High Grove Florilegium.

“We are dedicated to creating uncompromisingly beautiful and functional museum-quality papers for art and conservation,” said Paul Ciccone, Vice President of Research and Development for Monadnock. “We also produce a range of cotton stocks for industrial applications such as saturating bases, cushion stocks, medical blotters and barrier papers.”

BAP signs bamboo purchase agreement for production of sanitary papers; announces $60M Nicaraguan bio-refinery and paper mill

VANCOUVER, BC, April 20, 2018 (Business Wire) -BAP Industries of Guatemala is pleased to announce the signing of a 10-year exclusive Bamboo Purchase Agreement with United States based EcoPlanet Bamboo Group for 100% of the off-take from its sustainably grown Nicaraguan bamboo plantations, as part of a strategic alliance with Advance Pulp and Paper Machinery AP&P Machinery of British Columbia, Canada.

Utilizing AP&P technology, BAP will invest in the construction and operation of the world’s first bamboo bio-refinery and associated paper mill, which is to be co-located in Nicaragua within proximity of the bamboo raw resource. This initial facility will have the capacity to process up to 250,000 metric tons of bamboo annually, into a range of 100% bamboo toilet, tissue and cleaning papers.
WHO’S DOIN’ ANYTHING? (CONTINUED)

BAP & AP&P innovative pulping technology is zero waste, closed loop, chlorine free, and utilizes only 30% of the energy and water of a traditional wood chip pulp mill. Combined with EcoPlanet Bamboo’s tree-free, deforestation-free bamboo fiber, which has contributed to reforestation efforts in one of the most deforested parts of the planet, this strategic alliance is a triple-win scenario for conscious minded consumers across North and Latin America.

“The Bamboo Purchase Agreement with EcoPlanet, and the announcement of a $60M Nicaraguan facility with BAP is just the first step of a multi-faceted strategic alliance aimed at turning the toilet paper industry from a negative global footprint into something positive” says Mark Nash, CEO of AP&P Machinery. Mario Salan, CEO of BAP adds that this facility is the first of a trio of such bamboo industrial developments to be announced in the coming months.

EcoPlanet Bamboo has been committed to developing closed loop, clean bio-refineries, to ensure that end products are as clean, sustainable and environmentally positive as the bamboo fiber itself. “The Bamboo Purchase Agreement with BAP, and larger partnership into a state of the art manufacturing facility in Nicaragua fulfills a major goal we set out to achieve seven years ago. Most importantly it will provide hundreds of much needed jobs in Nicaragua, reward all those who have contributed towards achieving our triple bottom line vision, and provide the final piece in the building of a global bamboo resource base as a viable and market driven solution to deforestation” says CEO Troy Wiseman.

About BAP Industries: BAP Industries was developed as a partnership between a team of Guatemalan engineers and bamboo experts, and Canada based Advance Pulp & Paper Machinery, in order to develop a next generation pulp and associated paper and textile products; combining tree-free, deforestation-free bamboo with the world’s first bamboo based bio-refinery.

About EcoPlanet Bamboo: EcoPlanet Bamboo is the global leader in the development of sustainable bamboo plantations as a viable alternative resource for wood and fiber industries globally. The company owns and operates more than 4,000 hectares of bamboo plantations in Nicaragua and South Africa.

Valmet successfully starts up two Advantage DCT 200 tissue machines at Lee & Man’s Chongqing mill in China

ESPOO, Finland, April 23, 2018 (Press Release) -Valmet recently made two successful Advantage DCT 200 tissue line startups at Lee & Man's tissue mill at Chongqing, China. The first machine in the startup queue was TM13, which started producing high quality paper right from the start on January 18. The second startup was on March 3, when just as good tissue paper hit the reel on TM15.

"Valmet has sold a total of nine tissue machines to Lee & Man since 2014. All startups have been characterized by good collaboration, efficient installations and steady startup curves. Efficient project execution and tissue lines that deliver good results right from the first roll have become the trademarks of Valmet’s and Lee & Man's winning co-operation," says Valmet’s project manager Tomas Eklund. A big part of a successful delivery is trustworthy technology. Valmet’s well proven Advantage technology has been designed with the success of tissue makers in mind.

Efficient teamwork forms another great part of the success that has been achieved by Valmet and Lee & Man in Chongqing. "We work as one to reach our mutual aims. At this point, we know each other so well that the machines, more or less, start with a push of a button," says Eklund.

Valmet will start two more Advantage DCT 200 tissue production lines for Lee & Man during 2018. All at the same mill in Chongqing and with the same scope of delivery - complete tissue production lines featuring stock preparation systems and Advantage DCT 200HS tissue machines.

Technical information about the deliveries
All nine machines are equipped with OptiFlo headbox and cast alloy Yankee cylinders. The Advantage tissue technology includes ViscoNip press, steam heated AirCap hood, WetDust dust system and a SoftReel P reel. Basic engineering and site services are also included in the delivery. Valmet's automation package is also included, with Valmet DNA machine and process control system (DCS), as well as Valmet IQ quality control system (QCS) and Valmet IQ Dilution Profiler.

The tissue machine has a width of 5.6 m and a design speed of 2,000 m/min. Each machine has the capacity to produce 60,000 tons of toilet and facial tissue per year. Lee & Man uses virgin wood pulp and bleached bamboo fiber as raw material.

About the customer Lee & Man Paper Manufacturing
Established in 1994, Lee & Man Paper Manufacturing Ltd has grown from a small company into a leading paper and pulp manufacturer. The company's 6,500 employees are located at the company's five production sites in China. The company had a capacity of 7 million tons of container board, duplex board and tissue paper as well as 180,000 tons of pulp in 2014.

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.
WHO’S DOIN’ ANYTHING? (CONTINUED)

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.

Voith to supply 400,000 tonne/yr XcelLine paper machine to Grupo Gondi, Mexico

HEIDENHEIM, Germany and MEXICO CITY, April 9, 2018 (Press Release) -Grupo Gondi has entered into a contract with Voith to supply a new paper machine with an annual production capacity of 400,000 metric tons. The new paper machine will be located in a facility in Monterey in Northern Mexico. Voith will supply the complete BlueLine stock preparation and XcelLine paper machine from wet end process to winder, which should minimize the number of interfaces for the customer and maximize the operating efficiency of the project.

From early 2020, the new state-of-the-art PM 7 will operate at the new Papel y Empaques Monterrey (PEM) plant. The machine will have a working width of 6,660 mm at the reel and a design speed of 1,200 m/min to produce testliner and corrugated medium with basis weights in the range of 90 to 250 g/m2.

"With the new paper machine, Grupo Gondi will strengthen its position in the Mexican market for high-performance light weight recycled containerboard. It will also enhance our integration levels since our converting capacity has risen in recent years as we have expanded converting plants and grown through acquisitions. Voith will supply an extended scope of services, including the stock preparation, the paper machine, supporting sub systems and automation. Voith’s ability to deliver an advanced, full-line, state-of-the-art system was very important to us and we continue to work closely with our partners at WestRock in connection with project planning and execution," states Eduardo Posada, CEO at Grupo Gondi.

The XcelLine paper machine offers a range of special technical features that both improve the quality of the finished paper and reduce energy consumption. The scope of supply also includes a Tandem NipcoFlex Press, a TopFormer F, and an EcoCal calender. Moreover, the PM 7 will be equipped with a VariFlex NG winder with an operational speed of 2,500 m/min, with MCS, DCS and QCS completing Voith’s scope of delivery. Voith will supply the project with an extended scope, including detailed engineering for process, automation and electrical engineering.

In addition to the paper machine and the BlueLine stock preparation system, MERI, a Voith company, will supply the major sub-systems – material handling, internal water treatment, sludge handling, and reject handling. These systems are designed to lower operating costs while maintaining a clean and safe working environment.

About Grupo Gondi

Grupo Gondi is a leading paper packaging company in Mexico, strongly committed to its consumers, collaborators, investors, the environment and Mexico – where, over the past 65 years it has positioned itself as one of the major players in the paper and packaging industry. WestRock Company, a multinational provider of paper and packaging solutions for consumer and corrugated packaging markets, is a minority shareholder of Grupo Gondi.

Grupo Gondi is composed of 14 companies and a labor force of more than 7,500 employees. Thanks to our multi-plant approach the company offers integral packing and packaging solutions, specializing in the production of recycled paper, corrugated cardboard boxes, pre-printed corrugated boxes and solid fiber containers, folding containers, micro-corrugated and digital cardboard boxes as well as services that support the manufacture of these products.

Grupo Gondi relies on certified processes, international standards which allow the company to offer high-quality products and services on the market, based on a vertical integration that comprises the manufacture of paper from 100% recycled fibers as well as the creation of consumables and tools that contribute to the manufacture of the final product. In addition, Grupo Gondi exports packaging products indirectly to over 189 countries, having presence in the five continents.

About Voith

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, focusing on developing resource-conserving products to reduce the use of energy, water and fibers. Furthermore, Voith Paper offers a broad service portfolio for all sections of the paper manufacturing process.

Voith is a global technology group. With its wide range of systems, products, services and digital applications, Voith sets standards in the markets for energy, oil & 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.

Domtar’s Kamloops, BC, pulp mill to invest $3.5M for new machines to reduce air pollution

KAMLOOPS, BC, April 10, 2018 (Local News) - Residents of Kamloops can expect to breathe in cleaner air this summer if Domtar officials bring in new machines to the Kamloops pulp mill to reduce and improve air pollution.

In an annual air report prepared for Kamloops city council by Domtar, the company will invest $3.5 million towards new machines. One is an electro-static precipitator that is used to remove smoke and dust particles from gases and the other is a scrubber used to
**WHO’S DOIN’ ANYTHING? (CONTINUED)**

clean and reduce air emissions. It will also eliminate the need for liquid sulfur dioxide - one of the most hazardous liquids used at Domtar mill.  

*InfoNews.ca* - Kamloops pulp mill to receive new machines to reduce air pollution

**Kimberly-Clark, Weyerhaeuser, Jeld-Wen agree to pay $4 million to restore habitat at former mill site in Everett, WA**

SEATTLE, April 9, 2018 (The Olympian) - A federal judge in Seattle has finalized a nearly $4 million settlement with three companies over habitat damage caused by mill and manufacturing operations in Everett that date to the early 1900s.  

Weyerhaeuser Corp., Jeld-Wen Inc. and Kimberly Clark Corp. have operated pulp and paper mills, machine shops, casket builders and other endeavors in the Port Gardner Bay area near the mouth of the Snohomish River.  

*AP/The Olympian* - 3 companies agree to pay $4M to restore Everett habitat

**Valmet to supply three IQ quality control systems with IQ Fiber optical sensors for new tissue machines of Italian system integrator E.I.L**

ESPOO, Finland, April 9, 2018 (Press Release) - Valmet will deliver three Valmet IQ quality control systems with Valmet IQ Fiber optical sensors to the Italian system integrator E.I.L to be installed on three new tissue machines in EMEA area during 2018. The orders are included in Valmet’s first quarter 2018 orders received.  

"These three new orders are a step forward in our partnership with Valmet. We established this partnership in 2012 with the aim of integrating Valmet's quality control systems in our tissue machine projects. Valmet's IQ quality control system has proven to be highly appreciated in many end-user's installations for the accuracy and reliability of its quality measurements and controls," says Andrea Poleschi, Sales Manager, E.I.L.

"These three new orders from E.I.L are another key achievement in the long series of tissue quality control systems, which we have been successfully delivering in the EMEA area since 2012. Valmet is committed to developing and delivering innovative quality measurements, controls and reporting tools for the industrial digitalization of the tissue making industry. Our Valmet IQ quality control system has clearly a competitive advantage to improve the tissue makers' performances," says Luigi Caggiano, Country Manager, Italy, Valmet.

**Information about Valmet's delivery**

The three quality control systems to be delivered are based on the new tissue Valmet IQ 15 scanner, equipped with the optical sensor Valmet IQ Fiber and the advanced quality reporting tool Valmet IQ Reports.

The Valmet IQ Fiber sensor is a non-nuclear fiber weight measurement that has been developed especially for tissue to provide accurate moisture and fiber measurement with high frequency across the sheet. It is one of the latest Valmet innovations to bring the latest advances in quality control to the tissue machine.

**About the customer E.I.L**

E.I.L was established in 1980 in Italy. Supported by advanced software, E.I.L is able to propose viable and effective solutions starting from the planning stage, thanks to its knowledge of the technological issues of the paper industry and the needs related to the electrical sector. E.I.L’s high quality standards are applied for both the provision of single drive and for a complete turnkey systems.

**VALMET**

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.
WHO’S DOIN’ ANYTHING? (CONTINUED)

Toscotec-supplied new Prodergy tissue machine starts up at APP's Perawang mill

LUCCA, ITALY, April 5, 2018 (Press Release) - Toscotec’s new Prodergy tissue machine fires up at APP Group’s Perawang mill, in Indonesia. This start-up is part of a major APP order of Toscotec’s Prodergy machines, to be installed at APP Indonesian paper mills.

PRODERGY is Toscotec’s leading innovation: an AHEAD-2.0L tissue machine, 5.6 m width, 2,000 m/min operating speed, featuring a second generation TT SYD-22FT and steam-heated hoods. Toscotec’s 22 ft diameter steel Yankee dryer constitutes a world record: the biggest steel Yankee dryer ever manufactured worldwide for tissue application. This breakthrough equips Toscotec with a significant advantage in terms of technological innovation. Prodergy’s unprecedented drying efficiency is threefold, combining the benefits of the largest diameter TT SYD ever delivered worldwide, an efficient press configuration and steam-heated Yankee hoods. Each element of Prodergy’s drying equation contributes to the best possible energy efficiency of the tissue making process. The exclusive use of steam energy throughout the entire drying process ensures significant cost reduction compared with gas energy drying. The design of the TT SYD 22ft and the steam-heated Yankee hood system with multiple energy recovery stages deliver the highest dryness rate with minimum consumptions. The press configuration guarantees the highest possible degree of mechanical dewatering before entering the energy-based drying section of the AHEAD-2.0L.

Toscotec’s Sales Director Marco Dalle Piagge affirmed, “We are extremely proud of this incredible achievement. The first 22 ft TT SYD ever manufactured and delivered worldwide, and installed on a top performance tissue making line. We are making history and we expect Prodergy to set a new record for energy efficiency in tissue”.

Sappi inks new, R$1.8B renewable power plant deal with South Africa Dept of Energy for Mpumalanga mill

JOHANNESBURG, April 6, 2018 (Local News) - Sappi has signed an agreement with the Department of Energy to build a renewable energy plant at its mill in Mpumalanga. Sappi and consortium partners KC Africa and African Rainbow Energy and Power would spend a combined R1.8bn on a 25MW biomass energy unit at the company’s Ngodwana mill, said Sappi Southern Africa CEO Alex Thiel. Sappi will have a 30% stake in the facility, which is expected to contribute to the national grid from July 2020.
WHO’S DOIN’ ANYTHING? (CONTINUED)

Valmet to supply automation technology for PT. Buana Megah's PM 3 in Pasuruan, Indonesia

ESPOO, Finland, April 5, 2018 (Press Release) - Valmet will supply automation technology to PT. Buana Megah's PM3 board machine in Pasuruan, East Java, Indonesia. Valmet's delivery includes Valmet DNA automation system, Valmet IQ quality control system and consistency transmitters. The order is included in Valmet's first quarter of 2018 orders received. The delivery is scheduled to take place in the third quarter of 2018.

The board machine will have an annual capacity of 62,780 tons of board. It will produce board and liner. The production is expected to start up in the end of 2018. With Valmet's automation solution for process and quality control and consistency transmitter technology, the mill will be able to optimize machine performance and achieve the set high-quality goals. “Valmet is capable of offering a complete automation package, including all process controls with Valmet DNA, quality control with Valmet IQ and consistency transmitters. Our long tradition of innovative automation solutions and professional project management are in our favor,” says Pete Teh, Country Manager, Indonesia, Automation, Valmet.

Information about Valmet’s delivery

Valmet’s delivery comprises of Valmet DNA automation system with total of 2,150 I/Os and a Valmet IQ quality control system including a scanner with basis weight and moisture measurements as well as a standalone moisture measurement. Four Valmet Microwave Consistency Transmitters (Valmet MCA) and 14 Valmet Blade Consistency Transmitters (Valmet SP) ensure better measurements and controls. This comprehensive automation package will enable the mill to optimize its processes and achieve premium end-product quality.

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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.

Voith starts-up new XcelLine TM 6 at Brazil’s SEPAC

SAO PAULO, March 28, 2018 (Press Release) - Voith Paper, world leader in innovation for the paper industry, completed the successful start-up of the TM 6 XcelLine machine at SEPAC, a company headquartered in the Brazilian state of Paraná that is among the country’s five largest manufacturers of tissue paper for sanitary purpose. Installed in the company’s Mallet plant in Paraná, the TM 6 machine went into service at the end of 2017 and produced paper within the necessary quality specifications from the very first day. The machine is capable of producing nearly 110 metric tons of paper per day and has a design speed of 2,000 meters per minute.

Voith’s scope of supply covered the entire tissue machine, which was fitted with a MasterJet Pro T headbox, a CrescentFormer, a NipcoFlex T shoe press, an EvoDry Y steel plate Yankee cylinder, a high-efficiency EcoHood T hood and a MasterReel winder. The project also included the ancillary systems, automation systems, as well as installation supervision, commissioning and complete start-up assistance.

The project’s main features are the NipcoFlex T shoe press and its 4.8 meter steel plate Yankee cylinder, which besides ensuring greater speed and quality, enables SEPAC’s machine to consume up to 20 percent less thermal energy.

The project is part of the growth strategy pursued by SEPAC, a company focused on manufacturing tissue paper from virgin cellulose fibers, and will increase its annual production capacity to approximately 180,000 tons, making it one of the country’s largest tissue manufacturers.

SEPAC’s growth strategy began in 2007, with the purchase of its TM 3 from Voith. Over the last ten years, Voith has supplied four tissue machines to SEPAC – a clear demonstration of the successful partnership built on trust and respect that the companies have developed over the period.

About SEPAC

Sepac is one of Latin America’s largest tissue paper producers, with 40 years of experience in the domestic and international markets. Headquartered in the state of Paraná, the company is a market leader in the segment of tissue paper for sanitary purposes in Brazil’s South Region. Its state-of-the-art manufacturing facilities in Mallet (located in the Brazilian state of Paraná) and its successful distribution network reinforce the company’s significant growth potential. Sepac’s towels, napkins and toilet papers are marketed in all regions of Brazil and the Mercosur countries under the Duetto, Paloma, Maxim and Stylus brands.

In 2017, Sepac also joined the personal care segment with the launch of its BabyBoo disposable diapers brand. The operation is initially focused on the special and value segments with the BabyBoo “Fases” and BabyBoo “Dia a Dia” lines, which are distinguished by their attributes of absorption, comfort and anatomical shape.
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, Voith Paper is optimizing the paper manufacturing process, focusing on developing resource-conserving products to reduce the use of energy, water and fibers. Furthermore, Voith Paper offers a broad service portfolio for all sections of the paper manufacturing process.

For 150 years, Voith’s technologies have been inspiring customers, business partners and employees around the world. Founded in 1867, Voith today has around 19,000 employees, sales of €4.3 billion and locations in more than 60 countries worldwide and is thus one of the largest family-owned companies in Europe. Being a technology leader, Voith sets standards in the energy, oil & gas, paper, raw materials and transport & automotive markets.

Sofidel announces $360 million investment to install two tissue machines and new converting plant in Inola, US

PORCARI, Lucca, March 16, 2018 (Press Release) - The company announced today a new “greenfield” investment for an integrated plant (tissue production and converting facilities) in Oklahoma. The new production site will be located in Inola, Rogers County, near the town of Tulsa, Oklahoma.

Thanks to its South-Central position in the US, the area offers well-established logistics as well as affordable sources of energy and an expert workforce.

“I am glad to announce this new greenfield investment – the second one, after the first made in Ohio. This new investment will support our growth in the US significantly, being the American market one of the crucial ones for our Group” commented Luigi Lazzareschi, CEO of Sofidel Group. “Sofidel will build here a new, modern integrated plant to serve the South-Central and Central-Western areas of this great country, where we have been operating since 2012 and we have been growing year after year at a very fast pace. I would like to thank all the partners that have supported us in making this new project, they have played an integral role in helping us achieve this goal”.

The investment refers to the installation of two tissue paper machines for an overall production capacity of 120,000 tonnes per year each, with related converting lines. One machine will be dedicated mainly to toilet tissue production, while the second one will be used mostly to produce towels.

As a whole, Sofidel is committed to investing $ 360 million over three years (2018 – 2019 – 2020).

The facilities building is expected to start in March 2018 and will be completed by Q2 2020, while the converting lines and the warehouse functions will be in place by the end of Q2 2019. The new production plant, once completed, will employ 300 full-time workers.

Valmet to supply two containerboard production lines to Nine Dragons, China

ESPOO, Finland, March 19, 2018 (Press Release) - Valmet will supply two more containerboard production lines with related automation systems for Nine Dragons Industries Co., Ltd., China. The orders for the four previous machines were published in 2017 (PM 39 and PM 40, PM 41 and PM 42). The latest two production lines will be located in Dongguan (PM 43) and Quanzhou (PM 45) and are similar to the previous four containerboard production lines.

The two new containerboard production lines will be designed to produce high-quality testliner grades out of 100 percent recycled raw materials as the four production lines ordered last year. The start-ups of PM 43 and PM 45 are scheduled to take place within a few months’ timeframe in 2019. The start-ups of the four previous production lines are scheduled to take place a few months apart from each other starting from mid-2018.

The order of PM 45 is included in Valmet’s first quarter 2018 orders received and the order of PM 43 was included in Valmet’s third quarter of 2017 orders received. The value of the orders will not be disclosed. The value of an order of this type and scale is typically around EUR 90-110 million.

“Nine Dragons is committed to produce high quality containerboard products. We can deliver this promise with Valmet’s technically advanced board machines. Advanced technology and the modern and distinctive industrial design were certainly important factors in these decisions. I’m pleased that Nine Dragons has had such a good cooperation with Valmet in the negotiations of these six machines and all the previous projects,” says Mr. MC Liu, Deputy Chairman and Chief Executive Officer of Nine Dragons.

“Nine Dragons’ decision to purchase six-in-a-row energy and resource efficient containerboard machines is quite exceptional. The company values our innovative, modernly designed and sustainable board making technology. We are pleased to continue the good cooperation with Nine Dragons,” says Jari Vähäpesola, President of Paper Business Line, Valmet.

Technical details about the delivery
Valmet’s deliveries for PM 43 and PM 45 container board making lines are similar to the four previous ones. The deliveries will include steam and condensate systems, broke collection pulpers for stock preparation, a board machine from headbox to winder including a full scope automation package and process ventilation equipment.
WHO’S DOIN’ ANYTHING? (CONTINUED)

The containerboard machines will include OptiSizer Combi sizers combining both film and pond application for both sides. Film application is an optimal solution for lower basis weight grades. Pond application is for substantially higher basis weight grades needing higher penetration. This combination gives flexibility and opportunities to optimize the properties of different grades. As in the previous orders, the full scope automation packages include Valmet DNA process and machine controls and condition monitoring. Board final quality is managed with Valmet IQ quality control system, comprehensive range of profilers as well as web inspection and monitoring system. The deliveries comprise also modern analyzers from pulping and wet end to laboratory testing. PM 43 and PM 45 will produce testliner grades with a basis weight range of 75-140 g/m2.

About the customer Nine Dragons
Founded in 1995, Nine Dragons Paper Group is the world’s largest in recovered paper based paper manufacturing in terms of production capacity. The company and its subsidiaries produce linerboard, high performance corrugating medium and coated duplex board. The group’s paper machines in China are located in a number of locations. The group produces printing and writing paper in Dongguan and Taicang and packaging paperboard and specialty paper in Leshan, Sichuan Province. The group has also acquired 100% control equity interest in Hebei Yongxin Paper Co., Ltd.

VALMET
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River cleanup underway after hydraulic oil spill from International Paper’s Springfield, OR, mill

SPRINGFIELD, OR, March 14, 2018 (The Register-Guard) -Clean-up efforts are underway after roughly 200 gallons of hydraulic oil spilled into the McKenzie River about 800 feet downstream from the Eugene Water & Electric Board’s drinking water intake at Hayden Bridge.

Department of Environmental Quality officials said Wednesday that investigators determined the oil had leaked into the river beginning Monday night after a break in an International Paper hydraulic line. International Paper produces linerboard — a material used to line cardboard boxes — at its mill off 42nd Street in Springfield, south of the spill area. EWEB relies on the McKenzie River as Eugene’s water source. An agency spokesman said officials have determined there is no threat to the area’s drinking water.

The Register-Guard - McKenzie River oil spill cleanup effort underway
2018 ISA Pulp & Paper Industry Division Calendar

JAN
- 31: New Year's Day
- 26: Good Friday
- 1: Easter Sunday
- 2: St. Patrick's Day
- 3: Independence Day

FEB
- 28: Mardi Gras
- 30: US Tax Day / Election Day

MAR
- 14: St. Patrick's Day
- 17: St. Patrick's Day

APR
- 13: Easter Sunday

MAY
- 28: Mother's Day

JUN
- 7: Independence Day

JUL
- 4: Independence Day

AUG
- 1: Labor Day

SEP
- 13: Independence Day

OCT
- 1: Columbus Day

NOV
- 19: Veterans Day

DEC
- 25: Christmas
- 26: New Year's Day
"Coating Rheology: A review and recent work"
by
Lisa Weeks and Doug Bousfield
PRESENTED AT THE 2018 TAPPI PAPERCON APRIL 15 – 18 CONFERENCE IN CHARLOTTE, NC

"Innovating for Success with Project Management Principles"
by
Jay Stockard
Fisher & Arnold
PRESENTED AT THE 2018 TAPPI PAPERCON APRIL 15 – 18 CONFERENCE IN CHARLOTTE, NC

by
Jay Stockard
Fisher & Arnold
PRESENTED AT THE 2017 TAPPI PAPERCON APRIL 23 – 26 CONFERENCE IN MINNEAPOLIS, MN

This falls into the “Where are they Now” category; Jay Stockard was the co-recipient of the Inaugural PUPID Scholarship back in 2002. Jay tells me that following graduation from Miami of Ohio, he went to the Institute of Paper Chemistry at Georgia Tech & then worked for Pöyry until 2016 when he joined Fisher & Arnold. I’m glad to see that Jay has been working steadily in the pulp & paper industry!
2018 ISA PUPID Scholarship

We are pleased to award the 2018 $2000 PUPID Scholarship, to Andrew D. Kathan from Western Michigan University in Kalamazoo.

Andrew is the son of Linda Kathan, a Store Manager at getGo in Carmel, Indiana, and David Kathan, a Senior Managing Consultant at Sogeti in Indianapolis, Indiana. Andrew is a student at Western Michigan University and is a member of the WMU Lee Honors College. He is pursuing a Bachelor of Science in Paper Engineering and minoring in Mathematics with a 3.98 GPA. He will spend this summer in Domtar’s Port Huron mill (with Garrett Fisher) and expects to graduate in December 2018.

Andrew came to WMU in 2014 as a recipient of the Medallion Scholarship which is the most prestigious merit-based scholarship for incoming undergraduates. He was also recently name the Presidential Scholar for the WMU Department of Chemical and Paper Engineering and has received numerous other awards during his college career, including the 2016 WMU Paper & Chemical Departmental Scholarship, the TAPPI Process & Production Quality Division Scholarship, the TAPPI Paper & Board Division Scholarship, and the 2018 Engineer’s Week Dinner Scholarship.

Kathan is also a member of Tau Beta Pi engineering honor society, as well as WMU’s chapter of the Technical Association of the Pulp and Paper Industry (TAPPI). Andrew has held a technology co-op position with International Paper working on process variability reduction, as well as two internship positions with Neenah Paper and Domtar respectively working as a process engineer where he was able to run machine trials, implement new chemical addition systems, and perform studies in the wastewater treatment plant.

After graduation, Andrew plans to work as an engineer in a paper mill for several years and potentially attend graduate school to earn his Master’s in Business Administration.

In addition to his studies, Andrew has several hobbies that he is passionate about. Andrew has performed improvisational comedy for almost eight years; and is the current captain and president of Worklight Improv, WMU’s improv comedy team. This team prides itself on its long form improv, of which they draw inspiration from theatres such as the IO and Second City. Andrew hopes to continue his passion for improv and perform professionally at an improv theatre after he graduates.
**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/

**HELSDINK 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

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**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.

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**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!

### 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

JUN 2
ISA District #10 Leadership Conference (DLC) 2018

JUN 26
61st Annual ISA POWID Symposium

AUG 7
2018 ISA Water and Wastewater and Automatic Controls Symposium

From the World
JUL
Automation Instrumentation Summit

4
2018 co-locate with 5th ISA EMEA

CCST Answer
The correct answer is B: Resistance.
When measuring resistance, all voltage sources should be removed from the circuit whose resistance is to be measured. The multimeter will inject a known voltage into the circuit so that it can measure the resulting current. The multimeter then uses the voltage and current to calculate the resistance using Ohm’s Law. If there are any outside voltage sources remaining in the circuit, the voltage will not be constant, so the calculated resistance will be incorrect.
The resistance measurement displayed by a multimeter is the total resistance through all possible paths between the test lead probes. Measuring resistance across a component that is part of a circuit often requires removal of the component from the circuit.
The resistance of all components connected in parallel with a component being tested affects the resistance reading, usually lowering it. If the component is left in the circuit, the readings could be affected by other components in parallel with the component to be tested.

CAP Answer
The answer is A: "Project definition".
The ISA CAP Model for Automation Project Flow includes the following project phases:
1. Feasibility Study
2. Project Definition
3. System Design
4. Software Development
5. Deployment
6. Operation, Maintenance, and Support
The CAP Model includes a set of activities that should be performed during each phase. During the Project Definition phase, the project design basis and development of the Cost Estimate are completed. The Work Breakdown Structure (WBS) is developed to support the Design Basis (listing of tasks to be completed) and to support the Cost Estimate (time and resource allocation for each task and subtask).
**Answers to the Tuning Tip**

1. The correct answer is “C”:

Find the nearest temperature for 433 °F in **Table A1 - Thermocouple Table (Type J)** in the appendix of this guide.

The nearest temperature in the first column is 430. Look at the column headers at the bottom of the chart. Find the column header labeled 3. Follow the column up to the row with the 430 value. Where they meet is a total of 430°F + 3°F = (433°F).

Read the value of mV. The answer is: 12.044 mV
The best answer is C = 12.05

2. The correct answer is “B”:

<table>
<thead>
<tr>
<th>Exceptable</th>
<th>A. Electromagnetic fields from cables in trays do not affect optical cables.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Exceptable</td>
<td>b) Small radius bends can cause the cable to crack or break.</td>
</tr>
<tr>
<td>Exceptable</td>
<td>C. Overhead runs on messenger wires should be limited to 75 feet.</td>
</tr>
<tr>
<td>Exceptable</td>
<td>D. Underground fiber optic runs must be covered with concrete.</td>
</tr>
</tbody>
</table>

The best answer is B = Conduit fittings that require small radius bends should be avoided

3. The correct answer is “C”:

\[
Failure \ Rate \ (FR) = \frac{\text{number of failures}}{\text{total time (hours or years)}}
\]

Note: 1 year = 8,760 hours

MTTF (is normally expressed in years): 10 years
3 failures in 7 years is

\[
Failure \ Rate \ (FR) = \frac{3 \text{ failure} \times 10 \text{ years}}{7 \text{ years} \times 8,760 \text{ hours}} = \frac{30}{61,320 \text{ hours}} = 4.89 \times 10^{-4} / \text{hr}
\]

The best answer is C = 4.89 x 10-4 / hr

4. The correct answer is “A”:

The PLC (programmable logic controller) is typically the only controller programmed in RLL (relay ladder logic).

The best answer is A = Programmable logic controllers (PLCs)
ANSWERS TO THE TUNING TIP

The correct answer is “A”:

It can be seen from the graph below, that the quick opening valve has the largest gain with flow versus stem (spindle) travel for percent of open signal. The same is true for Cv versus stem (spindle) travel for percent of open signal.

![Graph showing Quick Opening, Linear, and Equal Percentage curves]

The best answer is A = Quick opening
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