Well, as I write this it is the middle of August, in the middle of Summer, and I hope you all had a great Easter. Summer in Washington State is winding down, but it’s still pretty nice.

Please go to page 15 & 16 to read the Director’s Message from PUPID Director Ronaldo Ribeiro of Cenibra.

The good news is that in the last quarter, PUPID has had 15 new members and has stayed constant at 191 regular dues-paying members; and we now have 16 members that are in active grace status.

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.
**TUNING TIP CSE PE REVIEW QUESTION:**

**LIQUID VALVE SIZING SAMPLE PROBLEM**

(Taken from Chapter 5 of the “Fisher Control Valve Handbook” – 4th Edition; Copyright 2005)

Assume an installation that, at initial plant start-up, will not be operating at maximum design capability. The lines are sized for the ultimate system capacity, but there is a desire to install a control valve now which is sized only for currently anticipated requirements. The line size is 8 inches, and a Class 300 globe valve with an equal percentage cage has been specified. Standard concentric reducers will be used to install the valve into the line.

Determine the appropriate valve size.

1. Specify the necessary variables required to size the valve:
   - Desired valve design—Class 300 globe valve with equal percentage cage and an assumed valve size of 3 inches.
   - Process fluid—liquid propane
   - Service conditions—
     - q = 800 gpm
     - P1 = 300 psig = 314.7 psia
     - P2 = 275 psig = 289.7 psia
     - ΔP = 25 psi
     - T1 = 70 °F
     - Gf = 0.50
     - Pv = 124.3 psia
     - Pc = 616.3 psia

2. Determine an N1 value of 1.0 from the Equation Constants table.
3. Determine Fp, the piping geometry factor.
4. Solve for Cv, using the appropriate equation.
5. Select the valve size using the flow coefficient table and the calculated Cv value.

Find the answers to this question on page 21
WELCOME TO THE 15 NEW ISA PULP & PAPER INDUSTRY DIVISION MEMBERS

Evan Wilson
Felipe Alexandre De Oliveira
Edison Strugo Muniz
Carlos Alberto Grosman
Anselmo Orlando Ribeiro Chagas

Michael Noffke
Don Stuart
Jaime Saldarriaga
Nilson Antonio Doradea Méndez
Finn McCullough

Aleksandar Palauzov
Andrew Einspanier
Marco Roberto Goncalves
David Wright
Matthew Noel

HERE’S A REMINDER TO THE 16 ISA PULP & PAPER INDUSTRY DIVISION MEMBERS WHO NEED TO RENEW THEIR MEMBERSHIP

Kenneth A. Power
Michael T. Alt
Christian A. Morin
Gary Lambert, CCST
Jimmy W. Key
Basa Sarat Chandra

Mark Noble
Glenn A. Smith
William Michael Sutton
Hossein Izadi Lybidi
Jonathan Ramos Cruz

Eric Gilbert
Sherman Argo
David Dyck
Jeff Stanton
Ayoub El Fouih

DON’T FORGET TO RENEW!

CCST question

A transmitter is calibrated for +40 to +140 inches of water for a level application. This is a ________ zero range.

A. suppressed
B. elevated
C. nominal
D. biased

CAP question

Which of the following statements is a benefit of having well-written learning objectives?

A. indicates how to apply the information back on the job
B. specifies expected behaviors upon completion of the training
C. accurately reflects assumptions about the target audience
D. specifies whom the educational program is intended for

See page 20 for the answers to the CCST and CAP questions
WHO’S DOIN’ ANYTHING?

Andritz starts up new tissue production line at Africaine Paper Mills, Algeria

GRAZ, Austria, Aug. 12, 2019 (Press Release) - International technology Group ANDRITZ has successfully started up the PrimeLineCOMPACT tissue production line, including stock preparation, delivered to Africaine Paper Mills (APM) in Algeria.

The ANDRITZ energy-efficient tissue machine has a design speed of 2,100 m/min and a working width of 2.85 m and produces tissue for high-quality facial wipes as well as toilet and towel paper grades. The machine is equipped with the latest ANDRITZ shoe press technology PrimePress XT Evo. With its energy-efficient design, improved dewatering, and reduced need for thermal drying, the shoe press minimizes energy consumption. Furthermore, the 16 ft. PrimeDry Steel Yankee enables a high drying capacity.

The stock preparation system also consists of equipment with the highest energy efficiency, such as a FibreSolve FSV pulper with innovative rotor, well-proven TwinFlo double-disc refiners as well as ModuScreen HBE headbox screens for the approach flow system. Fiber recovery and broke handling are also part of the scope of supply.

“Start-up of the mill was a great success, and the collaboration with ANDRITZ was very good. It is the first tissue machine for APM, and we are proud to announce the first paper on reel. For us, good paper quality combined with energy-efficiency is of utmost importance. The combination of a steel Yankee and a shoe press enables efficient drying with substantial energy savings.” Ziad Haffar, General Manager, Africaine Paper Mills (APM).

Africaine Paper Mills (APM) is an innovative paper manufacturing company founded by people with longtime and profound experience in the paper making industry. Its expansion plans include paper mills in several countries belonging to the MENA (Middle East & North Africa) region.

The successful start-up once again confirms ANDRITZ’s strong position as one of the global market leaders in the tissue industry and as supplier for complete tissue production lines, key components, and services.

ANDRITZ GROUP

ANDRITZ is an international technology group providing plants, systems, equipment, and services for various industries. The company is one of the technology and global market leaders in the hydropower business, the pulp and paper industry, the metal working and steel industries, and in solid/liquid separation in the municipal and industrial segments.

Other important fields of business are animal feed and biomass pelleting, as well as automation, where ANDRITZ offers a wide range of innovative products and services in the IIoT (Industrial Internet of Things) sector under the brand name of Metris. In addition, the company is active in power generation (steam boiler plants, biomass power plants, recovery boilers, and gasification plants) and environmental technology (flue gas and exhaust gas cleaning plants) and offers equipment for the production of nonwovens, dissolving pulp, and panelboard, as well as recycling plants.

ANDRITZ stands for passion, partnership, perspectives and versatility – core values to which the company is committed. The listed Group is headquartered in Graz, Austria. With almost 170 years of experience, approximately 29,600 employees, and more than 280 locations in over 40 countries worldwide, ANDRITZ is a reliable and competent partner and helps its customers to achieve their corporate and sustainability goals.

ANDRITZ Pulp & Paper is a leading global supplier of complete plants, systems, equipment, and comprehensive services for the production and processing of all types of pulp, paper, board, and tissue. The technologies cover processing of logs, annual fibers, and waste paper; production of chemical pulp, mechanical pulp, and recycled fibers; recovery and reuse of chemicals; preparation of paper machine furnish; production of paper, board, and tissue; sizing, calendering and coating of paper; as well as treatment of reject materials and sludge. The service offering includes system and machine modernization, rebuilds, spare and wear parts, on-site and workshop services, optimization of process performance, maintenance and automation solutions, as well as machine relocation and second-hand equipment. Biomass, steam and recovery boilers for power production, gasification and flue gas cleaning plants, systems and plants for the production of nonwovens, dissolving pulp, and panelboard (MDF), as well as recycling and shredding solutions for various waste materials also form a part of this business area.
WHO’S DOIN’ ANYTHING? (CONTINUED)

ABB to supply EPC for project to increase production and reduce environmental impact of Sappi’s Saiccor mill in South Africa

WESTERVILLE, OH, Aug. 6, 2019 (Press Release) - Sappi, the world’s largest producer of dissolving wood pulp, has chosen digital technology leader ABB to supply engineering, procurement and construction for the electrical, control and instrumentation portion of their project Vulindlela. The project is an ambitious plan to increase mill production by approximately 14 percent while reducing the pulp mill’s environmental impact. Due for completion in the winter of 2020, the project includes the design, supply, installation and commissioning of all electrical and automation equipment at Sappi’s Saiccor Mill located in Umkomaas, South Africa.

“Our ability to deliver a complete, multi-faceted solution, centered around a collaborative automation platform that supports the optimization of the entire production process, was key to securing this flagship order,” said John Manuell, Local Business Line Manager for South Africa, ABB Process Industries. “We look forward to helping Sappi reduce its environmental impact with safe processes and equipment, as well as assisting in realizing significant production gains.”

Based on the ABB Ability™ System 800xA distributed control system (DCS), the automation solution is the first pulp and paper project to use the single channel, Ethernet-based Select IO, which enables the decoupling of project tasks. This can lead to a significant reduction in commissioning time and helps ensure on-time, on-budget project execution. Additionally, the solution is complemented with software tools including Field Information Manager to help manage smart field devices and mobile workplaces that will give operators and production staff access to plant information from anywhere in the mill.

“A history of working successfully with ABB gave us full confidence in their ability to provide a complete solution that will help futureproof our operations,” said Wayne Weston, Vulindlela Project Director, Sappi. “As world leaders in dissolving wood pulp, we welcome this pioneering, integrated solution that will help us achieve our Project Vulindlela goals.”

Other ABB Ability™ digital offerings, such as Asset Management, Energy Management, Safety systems and Manufacturing Operations Management will help provide total visibility into, orchestration and control of Sappi Saiccor’s entire operation. In addition to the automation platform, the scope includes the extension of the 132kV distribution infrastructure, the medium voltage reticulation and the process electrification.

Sappi Limited is a global leader in paper, paper pulp and dissolving wood pulp solutions, Sappi Limited (SAP - listed and in the Top 40 on the JSE), is headquartered in Johannesburg, South Africa; has over 12,000 employees; manufacturing operations on three continents, in seven countries (nine mills in Europe, three mills in America and four mills in South Africa) and customers in over 150 countries worldwide. ABB is a pioneering technology leader with a comprehensive offering for digital industries. With a history of innovation spanning more than 130 years, ABB is today a leader in digital industries with four customer-focused, globally leading businesses: Electrification, Industrial Automation, Motion, and Robotics & Discrete Automation, supported by its common ABB Ability digital platform. ABB’s market leading Power Grids business will be divested to Hitachi in 2020. ABB operates in more than 100 countries with about 147,000 employees.

BTG to supply its dataPARC solution for new PM 4 TM at Kartogroup’s tissue mill in Burriana, Spain

ECLEPENS, Switzerland, July 29, 2019 (Press Release) - Kartogroup has selected the BTG dataPARC solution as their process information platform for their tissue mill located in Burriana, in the Castellón province of Spain. The mill is part of the Cominter Group, headquartered in Barcelona. This is the second tissue mill in the organization to select dataPARC. The first mill implemented dataPARC for its data historian, raw material batch management, quality control, and lab information management. Burriana will expand the functionality to include tissue machine performance scorecards, process centerlining, and statistical analysis. Data and displays from both mills will be visible to corporate management at company headquarters in Barcelona.

In addition to the dataPARC suite, the project scope also includes BTG’s Vigilance PRO for the new PM4 tissue machine starting up in September. Vigilance PRO is the Yankee performance and tissue blade vibration analysis system, built on dataPARC. It is already installed on Kartogroup’s other tissue machine, and the success there was a significant factor in the decision to implement dataPARC enterprise-wide. This new project confirms the strategic evolution of BTG as a leader in digital transformation in the pulp and paper industry, by providing unique data-driven solutions that differentiate BTG in the market.

The BTG Group is an international provider of integrated, highly specialized process solutions for the global pulp and paper industry. BTG is committed to help its customers achieve significant, sustainable gains in business performance.
WHO’S DOIN’ ANYTHING? (CONTINUED)

SIG to invest Euro 180 million in a second state-of-the-art aseptic carton packaging plant in Suzhou, China

NEUHAUSEN, Switzerland, July 30, 2019 (Press Release) - As the Asia-Pacific region continues to be one of the major growth engines for aseptic carton packaging, SIG has announced investment in the region with the construction of a second production plant in Suzhou, China.

To meet current and future customer demand, the new 120,000 square meter plant is expected to be operational in early 2021 and will be situated at the Suzhou Industrial Park (SIP), close to the company’s existing production facility and Tech Centre. With a total investment of EUR 180 million, the new plant will ensure exceptional delivery on outstanding opportunities in the Asia-Pacific region, where most countries continue to grow significantly. The plant is expected to achieve world-class environmental, safety and operational performance right from the start. The new production facility is testament to SIG’s strong partnership with SIP and the local government, as well as its unparalleled commitment to deliver world-class packaging, service and the most modern solutions to the rapidly growing Asian markets and to China in particular. SIG’s recently opened cutting-edge Tech Centre in Suzhou supports customer collaboration in the development and implementation of innovative product concepts and market-ready packaging solutions.

Across Asia, millions of people are only now starting to consume packaged food and beverages. The rise of new consumers, driven by increasing income, changing lifestyles and new consumption habits, represents a huge opportunity for aseptic carton packaging with its long shelf life without the need of a cooling chain.

At the same time, young and growing populations are adopting modern lifestyles in urban areas, with more on-the-go consumption, an increasing awareness of health and wellness, and a growing demand for high-quality nutritional food and beverage products.

Rolf Stangl, CEO at SIG: “The food and beverage market in Asia has seen continuous growth and is expected to continue on that path. Our new production plant will ensure we continue to excel at bringing new and exciting product and packaging concepts to market, quickly and efficiently. Together with our Tech Centre close by, the new plant is another pivotal moment for SIG in Asia. We will grow our business in the APAC region, but also expedite true beverage and dairy innovation for our customers, so they can quickly adapt to the changing lifestyle needs of Asian consumers.”

About SIG

SIG is a leading systems and solutions provider for aseptic packaging. We work in partnership with our customers to bring food and beverage products to consumers around the world in a safe, sustainable and affordable way. Our unique technology and outstanding innovation capacity enable us to provide our customers with end-to-end solutions for differentiated products, smarter factories and connected packs, all to address the ever-changing needs of consumers.

Founded in 1853, SIG is headquartered in Neuhausen, Switzerland. The skills and experience of our approximately 5,000 employees worldwide enable us to respond quickly and effectively to the needs of our customers in over 60 countries. In 2018, SIG produced more than 35 billion carton packs and generated €1.7 billion in revenue.

PMP to supply 18 new Intelli-Tissue EcoEc 1600 Premium machines at APP’s new mill in Rudong Jiangsu, China

JELENIA GORA, Poland, July 24, 2019 (Press Release) - MP (Paper Machinery Producer) is supporting the dynamic development of one of the biggest pulp and paper companies in the world for almost 20 years. One of the significant examples of our partnership was the delivery 25 Intelli-Jet V Hydraulic Headboxes for both, tissue and paper machines.

On 24 of May, 2019 APP has decided to award PMP with another project. This time scope of supply covers (18) eighteen complete Tissue Machines to APP’s new mill in Rudong Jiangsu, China. APP has decided to execute the project together with PMP, due to excellent cooperation in the past and the state-of-the-art technology implemented by PMP worldwide. APP has chosen Intelli-Tissue® EcoEc 1600 Premium, from a wide span of tissue making solutions offered by PMP. It is a perfect match for APP, thanks to premium tissue quality provided from the 1st day, very low media consumption, high capacity of the machine and high efficiency (over 95%). Furthermore, the project has a high return on investment what sealed the agreement between both companies.

All eighteen (18) Tissue Machines will be designed and manufactured with the same concept to produce tissue from 11, 5 up to 22, 0 gsm at the reel. Machines are designed for a maximum speed of 1600 m/min. Intelli-Tissue EcoEc 1600 platform is a perfect balance between achieved capacity and optimum energy savings.
WHO’S DOIN’ ANYTHING? (CONTINUED)

In the scope of supply of each machine, there are PMP’s core technological items such as:

- Intelli-Jet V - 5-channel, single layer, hydraulic headbox. Implementation of Intelli-Jet V® headbox secures hydraulic stability, sheet edge quality, perfect basis weight profile as well as low electric power consumption of the fan pump.

- Intelli-Former - Crescent Former type, a compact design with the optimum catch of the jet beam from the headbox and efficient dewatering.

- Intelli-Press - Single press design with a cantilevered framework. Intelli-Press® is equipped with Intelli-SPR - Suction Pressure Roll dia. 1421 mm with PU cover and high Nip load up to 115 kN/m. This solution enables to maximize the amount of water removed from the sheet while keeping product quality at the highest level, lowering media consumption and boosting machine capacity.

- Intelli-YD - Steel Yankee Dryer dia. 18 ft (5480 mm) manufactured with the highest quality, certified materials, with optimized shell structure what brings high drying efficiency with ultra-low media consumption.

- Intelli - Cap – Exhaust Cap over the Yankee Dryer assures efficient moisture removal at the same time providing a significant decrease of media consumption compared to conventional solutions.

- Intelli-Reel - Reel providing efficient, high speed, continuous paper winding and perfect parent roll structure.

As an addition, PMP has provided parts of approach flow equipment, mechanical drives, steam & condensate system, lubrication system, hydraulic system, wet dust & mist removal system, machine controls, as well as all necessary training, shop floor assembly and start-up supervision.

New machines will strengthen APP position on Chinese tissue market adding capacity of premium products with low green footprint thanks to ultra-low media consumption provided by PMP’s Intelli-Tissue EcoEc line.

About APP:
Asia Pulp and Paper Group (APP) is one of the largest pulp & paper companies in the world. Started in 1972 with Tjiwi Kimia producing caustic soda, now run operations across Indonesia and China with an annual combined pulp, paper, packaging product and converting capacity of over 19 million tons per annum. Responsible for delivering quality products to meet the growing global demand for tissue, packaging and paper in more than 120 countries across six continents.

About PMP:
PMP is a global provider of tissue, paper & board technology and has been supporting the pulp and paper industry for over 165 years, executing projects on 6 continents, in 34 countries. The Company has its headquarters in Jelenia Góra, Poland and has 6 facilities in 4 countries (Poland, USA, China, Italy). PMP is a recognized international player in both the paper & tissue industry.

Canada investing $28.8M in innovative technology at Domtar mill in Ontario that could replace single-use plastics

ESANOLA, ON, July 23, 2019 (Press Release) - Environmental leadership and economic growth must go hand in hand. That is why the Government of Canada is investing in innovation and sustainability in our forestry sector—to help secure good middle-class jobs and protect our environment for future generations. Today, Marc Serré, Parliamentary Secretary to the Minister of Rural Economic Development, on behalf of the Honourable Navdeep Bains, Minister of Innovation, Science and Economic Development, announced an investment of $28.8 million in Domtar Inc., a leading North American fibre innovator and pulp and paper production company. This investment will support Domtar’s $57.5 million project to implement new equipment and processes at its pulp and specialty paper mill in Espanola, Ontario.

Domtar’s project will involve commercializing its new Stealth Fiber Technology, which will produce stronger paper and allow for the production of innovative products that could replace single-use plastics when it comes to, for example, medical packaging and food wrap. These innovations will increase Domtar’s competitiveness in the global market, reduce waste from production, and reduce greenhouse gas emissions by 48,000 tonnes annually at the Espanola Mill—the equivalent of removing 16,000 cars from our roads.
WHO’S DOIN’ ANYTHING? (CONTINUED)

Thanks in part to this investment, Domtar will maintain 430 jobs. The company will invest more in research and development and will develop a diversity and gender equity plan to engage with women and Indigenous communities. Additionally, upgrades to the Espanola Mill will improve air quality and reduce noise pollution for the people living in and around Espanola.

Quotes
“Canada’s forest industry supports thousands of well-paying jobs in northern Ontario. Our government is proud to invest in innovations at Domtar that will increase the Espanola Mill’s competitiveness in the global market, reduce waste from production and reduce greenhouse gas emissions. It’s a win-win project for this community.”
– Marc Serré, Parliamentary Secretary to the Minister of Rural Economic Development and Member of Parliament for Nickel Belt

“By investing in innovation and sustainability in our forestry sector, we’re helping secure hundreds of good middle-class jobs and ensure the long-term competitiveness of Canadian pulp and paper production. Through this investment, Domtar will be able to commercialize innovative products that could help reduce our use of single-use plastics, while reducing its environmental impact.”
– The Honourable Navdeep Bains, Minister of Innovation, Science and Economic Development

“We are pleased to partner with the Government of Canada on this important initiative to upgrade the Espanola Mill’s infrastructure and improve its environmental performance. This investment will help the mill deliver technical innovation to produce products that could help reduce the use of single-use plastics.”
– Michael D. Garcia, President of Domtar’s Pulp and Paper Division

Quick facts

▪ Incorporated in Canada in 1929, Domtar is a fibre innovator, producing a variety of pulp and paper products. It has four pulp and paper production facilities in Canada.

▪ Domtar’s Espanola Mill sources 95% of its raw materials from northern Ontario.

▪ This investment is made through the Strategic Innovation Fund, a program designed to attract and support high-quality business investments in Canada’s most dynamic and innovative sectors.

▪ The Strategic Innovation Fund includes a $100 million envelope focused on providing support to the forest industry.

▪ In addition to the Strategic Innovation Fund, there are hundreds of programs and services to help businesses innovate, create jobs and grow Canada’s economy. With its simple, story-based user interface, the Innovation Canada platform can match businesses with the most fitting programs and services in about two minutes.

Toscotec to supply new tissue line for Slovak Hygienic Paper Group’s Paloma mill in Sladki Vrh, Slovenia


The turnkey supply includes one AHEAD-2.0L tissue machine, equipped with a second generation Steel Yankee Dryer TT SYD, Toscotec’s shoe press technology TT NextPress and gas-fired hoods TT Hood-Duo. The net sheet width is 5,500 mm, the maximum operating speed is 2,000 m/min and the production is 220 tpd. The AHEAD-2.0L machine will replace the mill’s existing PM6 and will manufacture high quality toilet tissue, kitchen towel and napkins for household and professional use in the AfH segment.

Toscotec will provide its proprietary Distributed Control System TT DCS and a complete electrification system. The scope also includes stock preparation equipment and accessories, Toscotec’s patented TT SAF (Short Approach Flow), the machine’s dust and mist removal systems and a shaft puller.

As part of a comprehensive service package, Toscotec will supply onsite erection, supervision, commissioning and start-up, as well as training programs to the mill’s personnel.

Following a capital increase by the private-owned investment fund Eco Investment in 2016, and the integration into the Slovak Hygienic Paper Group (SHP) group, the Slovenian tissue supplier Paloma aims to become the leading manufacturer of hygienic paper products in the Adriatic region and beyond.
WHO’S DOIN’ ANYTHING? (CONTINUED)

Richard Zigmund, CEO of SHP Group, says: “When we decided to invest in new capacity at Paloma’s production base, we started looking for a machinery supplier who could manage and successfully complete complex turnkey projects. Toscotec proved to have the right credentials to support our strategic program and supply the state-of-the-art technology we need to set Paloma’s manufacturing at full capacity.” “This new project strengthens Toscotec’s position as the leading turnkey supplier in tissue” says Alessandro Mennucci, CEO of Toscotec, “we look forward to working with Paloma, who has a longstanding tradition in the production of hygienic paper products and has built a strong team of highly specialized professionals. Based on their investment targets, we developed a fully customized design aimed at improving the mill’s energy efficiency and manufacturing processes, in step with this capacity increase.”

About Paloma d.d.
Founded in 1873, Paloma is a public limited company with a long-lasting tradition in the manufacture and marketing of hygienic paper products in Europe. The company’s annual production capacity is 72,000 tonnes of tissue and it currently employs 675 people. Paloma is predominantly export-oriented and it currently holds the position of market leader in South-East Europe.

Australian Paper and SUEZ appoints SMBC as financial advisor for its $600 million Energy from Waste facility in Australia

MT. WAVERLY, Australia, July 15, 2019 (Press Release) - Australian Paper and SUEZ have joined forces with Sumitomo Mitsui Banking Corporation (SMBC) as an important next step towards a $600 million Energy from Waste (EfW) facility in the Latrobe Valley. SMBC has been appointed Financial Advisor to the project, bringing significant EfW sector experience and a global perspective to the venture.

“SMBC will contribute additional commercial expertise to our project during a critical development phase. As Financial Advisor, SMBC will provide specialised support for project development and establish debt financing facilities as we seek to build a missing link in Victoria’s waste management...

The Fastmarkets RISI Power List 2019

July 22, 2019 - 06:15

Below are the Top 10 influencers from the Fastmarket RISI 2019 Top 50 Power List. Download the full list from Fastmarkets RISI or read it in Paper 360, published by TAPPI on July 24th.
Over the past few years, events and issues, some of which fall outside traditional pulp and paper making, have shown to have increasingly more influence over the industry. This year is no different.

From political issues—Brexit (again) and the US presidential election (despite being more than a year away)—to social media to trade to entertainment to other issues that affect the industry such as the paper straw, they all have a place on this year’s list. However, a person returns to the top of the list this year and it’s her second time as the most influential person in the industry. Nine Dragons’ Cheung Yan comes out as No. 1 in 2019, just as she did in 2017. It’s a family affair as her son Ken Liu, head of ND Paper, also makes a return appearance.

There are many other familiar names but many newcomers as well. As we have said in the past, we enjoy putting together this annual eclectic collection. It is neither a scientific study nor a popularity contest. It is more a year’s worth of observation along with the opinions of many experienced analysts within the industry.

As we were compiling this year’s list, the sad news came in that Sylvain Lhôte, director general of the Confederation of European Paper Industries (CEPI), died suddenly. Lhôte had been on the Power List for the last two years and was doing a fantastic job supporting the pulp and paper industries in Europe. Lhôte was recently also announced as the new president of the International Council of Forest and Paper Associations (ICFPA). He will be greatly missed in the industry worldwide.

Again, we would like to hear from you as to whom we may have missed and why they should be included. You can contact Graeme Rodden (grodden@fastmarkets.com) or Mark Rushton (mrushton@fastmarkets.com) with your list of people who deserve to be on the 2020 Top 50.
WHO’S DOIN’ ANYTHING? (CONTINUED)

1. CHEUNG YAN
NINE DRAGONS PAPER
is one of a select few people in the pulp and paper industry who have always been on the Power List since its inception 12 years ago. Cheung Yan heads 2019’s list for yet more audacious company expansion—in this year alone Nine Dragons will add 2.05 million tonnes/yr of capacity in China. The company will start up four new recycled linerboard machines by the end of October. Also, US subsidiary ND Paper, headed by Cheung Yan’s son, Ken Liu (#32) is in the midst of equipment upgrades and expansion projects that will see another 1.4 million tonnes/yr of capacity added to the four US plants it recently acquired. However, all is not totally rosy in the Nine Dragons’ garden; the chairlady recently told Fastmarkets RISI that “China’s imposition of an additional 25 percent tariff on US RCP has taken a heavy toll on the group’s profitability.”

2. MARK SUTTON
INTERNATIONAL PAPER
A perennial member of this list and the 2018 TAPPI/PIMA Executive of the Year, Sutton leads a company that has been named one of the Most Admired Companies by Fortune; one of the Most Ethical Companies by Ethisphere; and one of the 100 Best Places to Work by Computerworld. What more is there to add? On the mill front, IP acquired DS Smith’s packaging businesses in Portugal and France. It has postponed its US$300-million conversion of PM 15 in Selma, AL, (from UFS to whitetop and containerboard). Plus: will it make another play for Smurfit Kappa Group in the upcoming months?

3. WALTER SCHALKA
SUZANO
Not only a familiar face on this list, but also a four-time winner of the Fastmarkets RISI Latin American CEO of the Year Award, Schalka now leads a behemoth in pulp making after the merger with Fibria. His leadership skills will be put to the test in the coming months as pulp markets face an upheaval with slowing demand and oversupply. Suzano has announced downtime that will take more than 1 million metric tons off the market through 2019.

4. SUSUMU YAJIMA
OJI HOLDINGS
Fastmarkets RISI Asian CEO of the Year for 2019, Susumu Yajima has led the company to record sales and profit despite a deterioration in Japan’s domestic printing paper markets and severe weather events and earthquakes last year. Net sales of the company are up 4.4% and net profits are up 43.5% on the previous year. Oji credits the achievements mainly to its expanded operations and better prices for overseas pulp sales.

5. JUSSI PESONEN
UPM
Another Power List 12-year stalwart, CEO and president of UPM, Pesonen, moves up the list this year as he was recently awarded Fastmarkets RISI European CEO of the Year. One expert involved in his selection pointed to his efforts to “transform UPM from a business that was primarily focused on paper production to one that has broadened its reach across the pulp and paper sector.” Pesonen said in a recent interview, “Innovation and continuous exploration of new growth opportunities are central to UPM’s operations.”

6. ANTHONY PRATT
PRATT INDUSTRIES
Hard on the heels of its successful mill openings in Shreveport, LA, and Valparaiso, IN, Pratt is set to open its fifth 100% recycled corrugated medium and liner mill, this one in Wapakoneta, OH. Able to make 360,000 tonnes/yr, the total investment is about US$275 million. Under Anthony Pratt’s guidance, the company is the world’s largest privately-held paper and packaging producer. According to past statements, the company has plans for further expansion.

7. JOHN WILLIAMS
DOMTAR
Honored at PaperCon 2019 as the PIMA Executive of the Year, Williams was cited for his ability to continually evaluate long-term strategy while achieving short-term results. As well as a prescient move into adult hygienic care products, Domtar has found some success with its nanocrystalline cellulose business, CelluForce. A recent multi-million-dollar project helped CelluForce double its capacity. It says something about Williams’ leadership in that four other Domtar employees received PIMA management awards during PaperCon.

8. CRISTIANO TEXEIRA
KLABIN
Texeira has ambitious plans for Klabin. He said the company is “more ready than ever” to play a role in future packaging industry M&A. In the next five years, the company plans on spending US$2.3 billion on the Puma II project that will see two more integrated paper machines with a capacity of 920,000 tonnes/yr of linerboard. Plans are for the new capacity to be sold in export markets such as North America and Europe.
WHO’S DOIN’ ANYTHING? (CONTINUED)

9. AMAZON
It’s almost impossible to attend any paper industry conference without hearing one analyst or another talk about Amazon (as well as other e-commerce players) and the effect they have had on the packaging sector. Its tendency to over-package goods (boxes within boxes) has come under scrutiny and any cutback could have an effect on the sector. But e-commerce is here to stay and the biggest player holds great sway over the market.

10. TEGUH WIJAYA
APP
Asia Pulp & Paper never does things in half measures and the last 12 months are no different. The Indonesian pulp and paper giant has revealed plans to build the world’s largest paper and board mill on the coast of Andhra Pradesh, India. The proposed mill would be able to produce 5 million metric tpy and will cost around US$3.5 billion. The greenfield development comes on the back of strong growth predictions for domestic demand in India, which is set to double over the next decade. At the same time APP China is has plans for a massive greenfield tissue mill in Rudong county, Nantong city, with a capacity of 780,000 tonnes/yr.

ST PETERSBURG, Russia, July 9, 2019 (Press Release) - Ilim Group has signed a contract with ANDRITZ Oy, affiliate of the Austrian based ANDRITZ Group, to supply a recovery boiler (RB) for its new pulp and paperboard mill in Ust-Ilimsk, Russia.

The recovery boiler is an essential part of the pulp and paper production process. The quality of its operation determines the environmental footprint of chemical recovery during the kraft pulping process. The new recovery boiler will be manufactured in line with global environmental standards and best available technologies (BAT) in regard of the environmental performance.

“Ilim Group is a leader in the Russian business community in terms of environmental costs. We are one of the top three companies in this rating,” said Ksenia Sosnina, Ilim Group CEO. “All of Ilim’s investment projects have a strong focus on implementation of best available technologies (BAT). In 2018, Ilim invested more than RUB 11 billion in BAT projects, and this year we will maintain the same level of our environmental investments. Reduction of the environmental footprint is a key priority for us, that is why we select our suppliers very carefully. Andritz is not only a manufacturer of high-quality equipment, but also a technology pioneer. We are confident that our joint projects will be implemented successfully.”

“We are very proud to support Ilim Group in reaching their environmental goals with our globally proven technologies. This order again demonstrates the excellent relationship with Ilim Group”, says Kari Tuominen, President of ANDRITZ Oy.

To reduce emissions, Ilim’s new recovery boiler (RB) will be equipped with a highly efficient double-chamber precipitator, which will remove the dust and ensure that its concentration in emissions does not exceed 50 mg/Nm3. Additional incineration systems, including a stand-by incinerator, will be installed to ensure incineration of concentrated gases. Boosted equipment capacity will allow to increase the amount of black liquor dry solids fed to the incineration systems, bringing it to at least 75% ds, which will improve the boiler efficiency and at the same time significantly reduce the environmental footprint.

Moreover, the RB will be equipped with a distributed process control system (including automated control of incineration process) and online control of technological processes, which will ensure enhanced reliability and safety of the manufacturing process. The equipment will have a heat-power recycling system, which will allow to save resources and contribute to the reduction of the environmental footprint. The capacity of the new RB will be 1,950 tpd dry solids. The RB start-up is scheduled for 2021.

In the beginning of 2019, Ilim Group signed another large contract with the ANDRITZ Group to supply equipment for a new woodroom at the Koryazhma Mill. The new woodroom will have two debarking and chipping lines, chip and bark handling equipment as well as a SmartWoodyard advanced control system. The cutting-edge production process will reduce wood losses, and water and electric energy consumption per unit of product. The start-up of a new woodroom is scheduled for November 2021.

Ilim Group’s large-scale investment program will be completed in 2021, with a total CAPEX near RUB 200 billion. As a result, the total annual capacity of Ilim’s mills will reach 4.4 million tons. Ilim will retain its leadership in the global pulp and paper market. The Company is headquartered in St. Petersburg and has production facilities in Arkhangelsk, Irkutsk, Leningrad, and Moscow Oblasts.
WHO’S DOIN’ ANYTHING? (CONTINUED)

ANDRITZ Group is a globally leading supplier of plants, equipment and services for hydropower stations, the pulp and paper industry, the metal working and steel industries, and solid/liquid separation in the municipal and industrial segments. The company is also active in power generation (steam boiler plants, biomass power plants, recovery boilers, and gasification plants) and environmental technology (cleaning plants for flue and exhaust gases). The Group is headquartered in Graz, Austria, and has more than 170 years of experience, over 29 000 employees and more than 280 locations in over 40 countries worldwide.

Howe Sound Pulp and Paper takes maintenance outage at Port Melon, BC, mill for boiler work

PORT MELLON, BC, July 8, 2019 (Local News) - There may be an odour emanating from the Port Mellon pulp and paper plant over the next two weeks. But there is nothing to fear. Howe Sound Pulp and Paper Corporation is doing the annual maintenance of its wood waste boiler from Saturday, July 6th to July 20th.

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International Paper gets $2.8 million to reduce carbon emissions at Ticonderoga, NY, mill

GLENS FALLS, NY, June 12, 2019 (PostStar) - International Paper in Ticonderoga has received $2.8 million and recognition from the state for its work to reduce its carbon footprint.

Gov. Andrew Cuomo announced on June 7 the company was one of the first winners of the Commercial and Industrial Carbon Challenge, a program that requires companies to commit to reducing carbon emissions.

International Paper will use the money to create a turbine generator, optimize its power boiler and recover steam at its mill. The projects are expected to reduce the company's emissions by 225,000 tons, about the same as taking 3,200 cars off the road a year, according to the New York State Energy Research and Development Authority.

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

Valmet to supply new recovery boiler and ash leaching plant at ITC’s pulp mill in Bhadrachalam, India

ESPOO, Finland, May 22, 2019 (Press Release) - Valmet will deliver a new recovery boiler and ash leaching plant to ITC's Bhadrachalam pulp mill in India. The new boiler will replace three existing boilers. The start-up of the new recovery boiler is scheduled for late 2021. The order was included in Valmet's orders received of the first quarter 2019. The value of the order of this scope is typically around EUR 50-60 million.

“The new recovery boiler investment is an essential part of increasing the mill's pulp production. Our main drivers for choosing a modern state-of-the-art recovery boiler were reliability, energy efficiency and environmental performance. With their offering Valmet was able to meet our goals,” tells Sanjay Singh, Divisional Chief Executive of ITC.

“This recovery boiler represents a new era in Indian recovery boilers. It is significantly larger than the boilers previously delivered to India and has high power features which enable the mill to increase its energy production. With this project we are able to utilize our technology leadership and strong local presence in India. We are happy to continue our very good cooperation with ITC in upgrading their production fleet,” says Jussi Mäntyniemi, Vice President, Recovery Business Unit, Pulp and Energy, Valmet.

Technical details about Valmet's delivery

The Valmet RECOX+ recovery boiler will have a capacity of 2,700 tDS/day. The boiler includes several high-power features for example high steam parameters, flue gas heat recovery, combustion air preheating, feed water preheating and vent gas heat recovery. This enables 20% higher steam production compared to conventional recovery boilers. The medium size and high steam parameters set specific requirements for material design. The delivery also includes electrostatic precipitators (ESPs) which remove dust particles from recovery boiler flue gases.

Potassium and chloride levels in the ESP ash are controlled with two stage ash leaching system. Valmet AshLeach Duo is a well-proven, uniquely simple and effective system.
WHO’S DOIN’ ANYTHING? (CONTINUED)

Information about the customer ITC
ITC Paperboards and Specialty Papers Division is among the leaders in the paper and paperboard business with solutions to meet a diverse cross-section of packaging and communication needs. With emphasis on harnessing state-of-the-art technology, the company has emerged as the largest manufacturer of packaging and graphic boards in South Asia. ITC’s Paper Board And Specialty Paper’s Division has eleven machines at three locations with production capacity of 800,000 TPA.

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 2018 were approximately EUR 3.3 billion. Our more than 13,000 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.

Kruger Specialty Papers invests $40 million to build new bleached TMP plant at Trois-Rivières and to upgrade production at Wayagamack mill in QC

TROIS-RIVIERES, QC , March 26, 2019 (Press Release) - Kruger Specialty Papers reached an important milestone earlier this year when Kruger’s Trois-Rivières facility delivered its first shipment of bleached thermomechanical pulp (TMP) which enabled the Wayagamack Mill to expand its product portfolio into a wider range of brightness levels. In total, $40 million were invested to build the new bleached TMP plant at Kruger Trois-Rivières and to upgrade production at Wayagamack.

Launched in September 2017, Kruger’s SPEK project is a three-year initiative to develop new markets for the Brompton, Wayagamack and Trois-Rivières mills as part of the Company’s strategy to diversify its production and complement its product portfolio. Upon launching SPEK, Kruger also created its new Specialty Papers division which is leveraging the Company’s long-standing papermaking expertise, production facilities and customer service infrastructure to introduce innovative and sustainable high-quality products. Target markets for these new products include lightweight packaging for the food and retail industries, labelling and digital printing.

This expansion of Wayagamack’s product portfolio was achieved less than six months after another important SPEK project milestone was achieved, in August 2018, when Kruger’s Brompton Mill introduced new specialty grades and quickly reached its targets in terms or production volume, product quality, sales and customer satisfaction. Similarly, preliminary reactions to the new coated paper manufactured by Wayagamack from the Trois-Rivières TMP have been excellent.

In addition, the Wayagamack and Brompton Mills could benefit from a unique advantage in the market with their access to a steady supply of cellulose filaments (CF) from Kruger Biomaterials. This eco-friendly strengthening additive, which helps make the paper lighter and stronger, is an exclusive advantage that enables Kruger to offer high-performance alternatives to manufacturers of specialty packaging and labelling products who are looking to reduce their carbon footprint.

Committed to offering environmentally friendly solutions to its customers, Kruger is also proud to have earned the EcoVadis Silver level rating after its very first assessment by this international organization that evaluates corporate social responsibility (CSR).

About Kruger
Founded in 1904, 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.
### 2019 ISA Pulp & Paper Industry Division Calendar

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### Conferences
- ISA Pulp & Paper Industry Division
- Holidays
- US Tax Day / Election Day
DIRECTOR’S MESSAGE by RONALDO NEVES RIBEIRO,
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<th>Links to Related Websites</th>
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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 your 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!

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

<table>
<thead>
<tr>
<th>OCT 25</th>
<th>Annual Leadership Conference</th>
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<tr>
<td>NOV 04</td>
<td>2019 ISA Process Industry Event (PCS)</td>
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CCST Answer

The correct answer is A, "suppressed." If an instrument is mounted below a vessel, it senses a total head. This head includes the head developed by the distance from the instrument location to the bottom of the vessel and does not represent the true level in the vessel. The head due to the distance below the vessel must be compensated for by calibrating the transmitter using zero suppression techniques. This technique ensures the head due to the distance below the vessel is set as the zero point for the level measurement, thereby removing it from the determination of the actual level. Reference: Goettsche, L.D. (Editor), *Maintenance of Instruments and Systems, Second Edition*, ISA, 2005.

CAP Answer

The correct answer is B, "specifies expected behaviors upon completion of the training". Any training that is presented to students must have well-written learning objectives so that students and instructors can determine if those objectives have been met, through demonstration of skills or through testing.

The training should be given to instill a behavior pattern in the student, whether it is for general knowledge, such as material safety, or for skill performance, as in executing a new SOP. A comparison of actual behavior versus the learning objectives can be a valuable feedback component that helps improve the training presentation and/or content. Reference: Trevathan, Vernon L., *A Guide to the Automation Body of Knowledge, Second Edition*, ISA, 2006.
**SOLUTION TO THE TUNING TIP**

1. Specify the necessary variables required to size the valve:
   - Desired valve design—Class 300 globe valve with equal percentage cage and an assumed valve size of 3 inches.
   - Process fluid—liquid propane
   - Service conditions—
     - \( q = 800 \text{ gpm} \)
     - \( P_1 = 300 \text{ psig} = 314.7 \text{ psia} \)
     - \( P_2 = 275 \text{ psig} = 289.7 \text{ psia} \)
     - \( \Delta P = 25 \text{ psi} \)
     - \( T_1 = 70 \_\text{F} \)
     - \( G_f = 0.50 \)
     - \( P_v = 124.3 \text{ psia} \)
     - \( P_c = 616.3 \text{ psia} \)

2. Determine an \( N_1 \) value of 1.0 from the Equation Constants table.

3. Determine \( F_p \), the piping geometry factor.
   - Because it is proposed to install a 3-inch valve in an 8-inch line, it will be necessary to determine the piping geometry factor, \( F_p \), which corrects for losses caused by fittings attached to the valve.
   - \( F_p = \left[ 1 + \frac{\Sigma K}{N_2} \left( \frac{C_v}{d^2} \right)^2 \right]^{-1/2} \)
   - where, 
     - \( N_2 = 890 \), from the Equation Constants table 
     - \( d = 3 \text{ in.} \), from step 1 
     - \( C_v = 121 \), from the flow coefficient table for a Class 300, 3 in. Globe valve with equal percentage cage 
   - To compute \( \Sigma K \) for a valve installed between identical concentric reducers:
     - \( \Sigma K = K_1 + K_2 \)
     - \( = 1.5 \left( 1 - \frac{d_2^2}{D^2} \right) \)
     - \( = 1.5 \left( 1 - \frac{(3)^2}{(8)^2} \right) \)
     - \( = 1.11 \)
   - \( \) 
     - \( D = 8 \text{ in.} \), the internal diameter of the piping so,

4. Determine \( \Delta P_{\text{max}} \) (the Allowable Sizing Pressure Drop.)
   - Based on the small required pressure drop, the flow will not be choked
     - \( \Delta P_{\text{max}} > \Delta P \).

5. Solve for \( C_v \), using the appropriate equation.
   - \( C_v = \frac{q}{N_1 F_p \sqrt{\frac{P_1 - P_2}{G_f}}} \)
   - \( = \frac{800}{(1.0)(0.90) \sqrt{0.5}} \)
   - \( = 125.7 \)

6. Select the valve size using the flow coefficient table and the calculated \( C_v \) value.
   - The required \( C_v \) of 125.7 exceeds the capacity of the assumed valve, which has a \( C_v \) of 121.
   - Although for this example it may be obvious that the next larger size (4 inches) would be the correct valve size, this may not always be true, and a repeat of the above procedure should be carried out.
   - Assuming a 4-inch valve, \( C_v = 203 \).
   - This value was determined from the flow coefficient table for a Class 300, 4-inch globe valve with an equal percentage cage.
   - Recalculate the required \( C_v \) using an assumed \( C_v \) value of 203 in the \( F_p \) calculation.
   - \( F_p = \left[ 1 + \frac{\Sigma K}{N_2} \left( \frac{C_v}{d^2} \right)^2 \right]^{-1/2} \)
   - \( = \left[ 1 + \frac{1.11}{890} \left( \frac{203}{8^2} \right)^2 \right]^{-1/2} \)
   - \( = 0.97 \)
   - The required \( C_v \) then becomes:
   - \( C_v = \frac{q}{N_1 F_p \sqrt{\frac{P_1 - P_2}{G_f}}} \)
   - \( = \frac{800}{(1.0)(0.97) \sqrt{0.5}} \)
   - \( = 116.2 \)
   - Because this newly determined \( C_v \) is very close to the \( C_v \) used initially for this recalculation (116.2 versus 121.7), the valve sizing procedure is complete, and the conclusion is that a 4-inch valve opened to about 75-percent of total travel should be adequate for the required specifications.
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