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SAPPI

From a single mill in South Africa, Sappi has evolved to become one of the largest producers of pulp, paper, packaging and specialty papers in the world

Containerboard/OCC

Early January sees light activity and flat pricing for OCC as China demand is quiet

Sustainable Practices



Buckman's new CEO, Junai Maharaj, says his company is working toward a more innovative and sustainable future and is committed to helping the pulp and paper industry do the same by focusing on greener chemistries and smart technologies.

By John O'Brien, Managing Editor

On April 28, 2017, Junai Maharaj became Buckman's first non-family Chief Executive Officer. Maharaj succeeded Steven B. Buckman and is only the fourth CEO the company has had since Dr. Stanley J. Buckman, a biochemist, established Buckman Laboratories in 1945.

Today, Buckman is a privately-held, global specialty chemical company serving customers all over the world in pulp and paper, leather and industrial water treatment and process chemistry. Buckman's global headquarters is in Memphis, Tennessee, situated on the same spot as the original building, which opened in 1945, on the corner of North McLean Blvd. and Chelsea Ave.

PaperAge recently caught up with Junai Maharaj to learn

a bit about Buckman's new CEO and more so about the company's focus on sustainable chemistry and technologies for the pulp and paper industry.

What first brought you to Buckman?

My journey with Buckman actually began in 1996 when Buckman was making headlines for best practices on knowledge sharing under the leadership of the then-CEO, Bob Buckman. I was fascinated by how a chemical company was solving customer problems using a global platform called K'netix®. It was incredible. Here was a chemical company that was actually selling knowledge but monetizing it through the sale of chemicals and services.

I was assigned to the Buckman account when I was working for an audit, tax and business consulting company in South Africa in 1996, and it did not take me long to learn that Buckman was hyper-focused on its customers, innovation and was fiercely committed to the development of its people. I could easily see myself growing in a company like Buckman. It seemed that the feeling was mutual. I accepted the Finance Manager role at Buckman Africa in 2002 and from there moved into the role of General Manager of Operations in 2006, before becoming General Manager of South Africa in 2012.

You previously served as General Manager of Buckman South Africa and Managing Director of Buckman Europe, Middle East and North Africa (EMENA). What can you tell us about your new role as CEO?

I am extremely honored to serve as Buckman's fourth CEO and as the company's first non-family CEO. While Buckman is a privately-owned company, the Buckman family has invested in the development of its people to ensure that the company continues to innovate and meet the growing and new expectations of customers. I am an example of the commitment our shareholders have for its people.

There was no doubt that I had some big shoes to fill when Steve Buckman retired after being CEO for 17 years. I knew there were some things I wouldn't change like our focus on the customer, safety, associate development and our commitment to the community. But I also had some ideas of my own. I wanted to ensure that we leverage our core and distinctive competencies to further enhance the customer experience. I wanted to do this by delivering innovative products and smart chemical solutions to our customers that provide them with meaningful and measurable benefits.

We are focusing on developing smart application technologies that, when combined with our proven range of products and the expertise of our associates, offer solutions to our customers that will improve their bottom line. In addition, our culture, global footprint and our size gives us the agility and ability to quickly adopt and implement changes that benefit our customers and our associates.

The pulp and paper industry is Buckman's largest market. From a supplier's standpoint, how is chemistry changing for the industry? Are there prominent trends?

We see two main trends in the pulp and paper industry.

First, our customers are trying to create more sustainable processes in their operations, which means they require



"We are focused on developing greener chemistries and connecting them with our smart technologies to help customers get more accurate data and better process control while reducing their environmental footprint." – Junai Maharaj.

chemistries that allow them to do more with less and more safely. Buckman's product offering is constantly evolving to meet our customers' needs in this area.

The other significant trend is the customer's desire to monitor their chemical applications to improve process control and minimize costs. Chemistry is only part of the solution we deliver. Buckman meets customer demands by giving them more insight and control over how our products interact with their process. Buckman's recent acquisition of smart technology, which I'll discuss in more detail later, is a significant step in our ability to offer a smart solution — combining chemistry, technology and expertise — for our customers.

Buckman offers a relatively new green enzymatic technology developed to reduce the use of traditional chlorine-based pulp bleaching chemistries. What are the benefits of this technology?

We are proud to offer a greener chemistry called Vybrant®, which reduces the use of traditional chlorine-based pulp bleaching chemistries. It's one of our enzymatic bleaching technologies that works in pre- and post-bleaching processes. One of the great things about Vybrant's pre-bleaching technologies is that it makes Kraft fibers more receptive to bleach, reducing ClO₂ usage by as much as 20% and reducing the usage of water and other brightening chemistries.

In the post-bleaching process, Vybrant's technologies use specially selected enzymes to remove brightness-limiting



Smart Technology. Buckman acquired CCMI and with it came an entrained air technology that has been rebranded as ECHOWISE, which is non-intrusive, provides real-time continuous data and requires no downtime to install. The reliable data it provides enables pulp and paper manufacturers to reduce the amount of variability in their manufacturing process.

chromophores in bleached pulp which can help mills achieve a higher brightness with less bleach and reduce the usage of optical brighteners.

What is Buckman doing to help pulp and paper producers improve the sustainability of their processes and operations?

Buckman has always found it important to work toward a more sustainable future, and we're committed to helping the pulp and paper industries do the same. Therefore, we are focused on developing greener chemistries and connecting them with our smart technologies to help customers get more accurate data and better process control while reducing their environmental footprint. For example, Buckman's Maximize[®] enzymatic technologies are engineered to treat specific fiber types, opening up fibers for optimal performance and thus reducing the energy needed to achieve the required strength. These products also allow the use of more recycled fiber while reducing steam consumption.

We also have an advanced enzymatic technology for boilout programs. With Buzyme[®], we accelerate deposit removal in paper machine systems while also addressing the safety and environmental concerns with traditional alkaline boilouts that require additional safeguards to protect employees and effluent systems.

The Buckman Recovery Boiler Advisor (RBA) is an example of a digital solution used by paper mill personnel operating a Recovery Boiler. The RBA uses existing data contained in the mill's DCS system to alert mill personnel of a water leak in the recovery boiler allowing them to take quick action to prevent explosion.

When these chemistries are paired with a smart product like our remote monitoring system, Buckman OnSite[®], customers can detect and prevent problems before they occur.

Internally, what measures has Buckman taken to operate in a sustainable manner?

At Buckman, we believe becoming more sustainable is an ongoing journey. We recently released our fourth sustainability report which adheres to the stringent guidelines of the Global Reporting Initiative (GRI). Reporting through the GRI gives us the structure by which to look at the things that are important to our stakeholders and engage with them on a regular basis.

Through our meticulous measurements, we found that we made great progress since setting our initial reduction goals for emissions, waste, energy and water consumption in 2010. Over the course of five years, we met and even exceeded some goals, and we made significant strides toward reaching the others.

Those goals expired in 2015 so we've set new reduction targets of 10% in those areas of emissions, waste, energy and water consumption. We are happy to say that we have already met our 2020 goal for water discharge intensity.

The reporting process also allows us to identify areas where we need to improve. Through this process, we know that we need to improve our data to enable us to report more completely in the areas of gender, new hire retention rates, age group and minority group. We plan to address these issues in our 2018 sustainability report.

Buckman acquired CiDRA Chemical Management Inc. (CCMI) at the end of September 2017. How is CCMI being integrated into Buckman's business structure?

In September, we made Buckman history with the largest acquisition since our company's founding in 1945. The acquisition of CCMI greatly expanded our smart technology solutions. We recently rebranded the technology offering from this acquisition as ECHOWISE[™], whose name was carefully chosen to reflect the process control that ECHOWISE brings to a customer's operations.

The acquisition of CCMI is very much in line with our vision for Buckman's future by helping us grow our portfolio and competency in smart technology. Right now, we are focusing most of our ECHOWISE efforts on the pulp and paper and bioprocessing markets in North America. As far as our next steps, we are conducting research and working on a deliberate plan to expand ECHOWISE into our other operating

companies as early as the end of the first quarter of 2018.

This acquisition has obviously been the highlight of 2017. We're excited to demonstrate what a customer can accomplish when they leverage smart technology with our proven chemical applications, advanced monitoring systems and dedicated, experienced people.

CCMI's intellectual property includes patents for measuring entrained air in the pulp and paper industry. What can this technology do for a pulp and/or paper mill?

As I mentioned earlier, we are focused on developing industry-leading chemistries that can be used seamlessly with our problem-solving expertise and smart technology, like ECHOWISE and Buckman OnSite. With the addition of our entrained air technology (ECHOWISE), we are able to provide a smart solution that gives customers advanced process control and accurate, reliable and unique data that in many cases was previously unavailable.

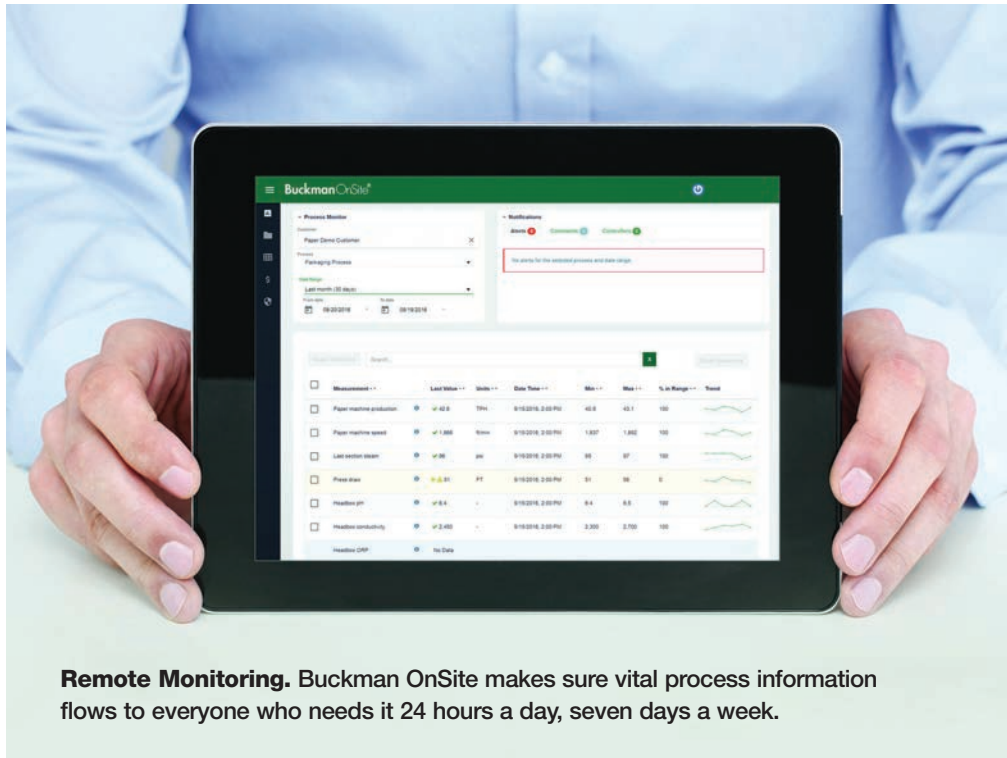
Specifically, for a pulp mill, ECHOWISE, along with the Buckman defoamer program, gives a customer a continuous stream of information in real time so they can optimize pulp cleanliness and washing efficiency in real time. Other benefits mills will see include reduced bleach costs, reduced chemical costs on the paper machine, increased production rate and increased O2 delignification efficiency.

For the paper mills, ECHOWISE will bring a new level of efficiency to mill operations by reducing variability at the wet end and in the forming section, along with improving drainage and decreasing steam consumption.

We think ECHOWISE is a gamechanger. Not only is it non-intrusive, provides real-time continuous data and requires no downtime to install, but most importantly, the reliable data it provides enables manufacturers to reduce the amount of variability in their manufacturing process.

Buckman offers a remote process monitoring system, Buckman OnSite®. Tell us a bit about this system.

Buckman OnSite was one of Buckman's first smart products. It makes sure vital process information flows to everyone who needs it 24 hours a day, seven days a week. Buckman OnSite is a cloud-based technology that gives customers access to auto-



Remote Monitoring. Buckman OnSite makes sure vital process information flows to everyone who needs it 24 hours a day, seven days a week.

ated control data, manually entered data and safety data sheets. The mobile capabilities allow key people to receive alerts as well as monitor trends for key customer processes.

What I think is important to note about smart products like Buckman OnSite and ECHOWISE is that they are specifically designed to work in conjunction with Buckman's comprehensive pulp and paper technologies.

Buckman has a global community engagement initiative called BuckmanCares. What does this program involve?

Buckman's philanthropic efforts started with Mertie Buckman, our founder Dr. Stanley Buckman's wife. Mrs. Buckman believed very strongly in giving back to those in need, whether it was in our own neighborhood or across the globe. Given Buckman's global footprint today, our BuckmanCares initiative impacts more than 81,000 lives annually.

Buckman associates find it extremely important to give back in our communities around the globe. BuckmanCares ensures that associates get to do that by dedicating Buckman resources-both financial and human-to causes that will have a lasting impact in their regions.

Globally, BuckmanCares has three focus areas: improving education for youth, enhancing health and human services and bolstering environmental stewardship. We carefully chose these efforts because they provide unique opportunities for personal growth and fulfillment for our associates.