SAVCOR

Savcor Forest Group Magazine 1/2013

Common Goal: Customer Success

Improved production efficiency, cost savings, raw materials optimization – familiar objectives to us all at the moment.

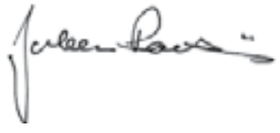
Very difficult financing situation, reduced margins and lack of new investments, among other things, reflect the challenging market conditions we are facing. Existing production processes have to be fully utilized and the raw materials used more efficiently all the time. Additionally life-cycle of process equipment needs to be further optimized.

We, at Savcor Forest, want to support our customers to overcome these challenges: in improving the value chain management of the wood and other raw materials, life-cycle management of production equipment, production efficiency, and in achieving cost savings for example by optimizing energy and water usage. Our solutions cover the entire value chain, the information must be transferred from one operation to another inside the customer´s processes.

Savcor Forest is ready to face today´s challenges and to develop its operations open-minded. We want to have an open dialogue with our customers to thoroughly understand their changing needs.

We are eager to participate in innovative development projects together with our customers in order to ensure that there will be a satisfied customer also at the end of the whole value chain. You can read one example about quality development in this magazine.

Have a successful this year!



CEO Jukka Rautiainen
Savcor Forest Group

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Metsä Fibre and Savcor – Over 30 Years Cooperation

Metsä Fibre Joutseno Mill. Photo: Metsä Fibre.

Metsä Fibre and Savcor have been partners for a long time. The cooperation started at the Kaskinen pulp mill more than 30 years ago and has continued strongly in different development projects.

The cooperation between the two companies started in the early 1980´s at the Metsä-Botnia Kaskinen pulp mill. The mill had cracks in their impregnation vessel that was caused by stress corrosion. **Hannu Savisalo** and **Martti Pulliainen** from Savcor together with **Antero Heinävaara**, **Risto Joronen**, **Antti Virkkala**, **Timo Piilonen**, **Teuvo Mäkitalo** and **Erkki Varis** from the Kaskinen pulp mill, searched for a solution to the problem. At Savcor´s suggestion, the Anodic Prevention System (AP) was installed in the impregnation vessel and results were achieved allowing the mill to continue using the old vessel.

Development in many areas

Metsä Fibre and Savcor have had continuous cooperation in many areas over the years. The partnership has covered all Metsä Fibre mills and various parts of the pulp making process. Savcor´s electrical corrosion prevention systems have been installed in digesters, impregnation vessels and bleaching washers at Metsä Fibre mills. Savcor has provided the mills with monitoring systems, corrosion studies and measurements related to material choices and process changes, as well.

The Recovery Boiler Diagnostic System (Savcor BDS) was developed in cooperation in the late 1990's to prevent corrosion problems in a recovery boiler. Several research and survey projects have also been made in material engineering and material durability in collaboration with other specialists.

”We need partners, who are top experts in their field”

- Our goal at Metsä Fiber is to improve our operations continuously. Thus, we need partners, who are top experts in their field. In our long-term cooperation with Savcor Forest, we have joint our world-class know-how to prevent corrosion in process equipment. The solutions have secured maximum usage of our capacity and extended life-cycle of the process equipment, says Mr. **Ismo Nousiainen,** SVP, Production, Metsä Fibre.

- Our cooperation has worked perfectly. Metsä Fibre has always been very motivated to further develop their operations and to look for new innovative opportunities, summarizes Mr. **Jukka Rautiainen**, Savcor Forest´s CEO. We at Savcor, see that our partnership has had a very solid base with mutual confidentiality. We have shared a common goal, and solved various problems together.

Aiming consistent quality

Metsä Fibre focuses on long-term quality work, with special attention to customers´ needs to secure consistent quality and to manage variations. Savcor Forest has been involved in the project, in which Metsä Fibre has developed a quality management tool “Botnia FOX-quality index” (Fibre Online Index).

The index can be used at the pulp mill's quality control and development to replace conventional laboratory measurements with online data. This allows them to take systematic advantage of customer feedback on quality follow-up.

Photo: Metsä Fibre.

”Real-time quality information can be used throughout the value chain to improve efficiency”

Botnia FOX combines Metsä Fibre's long-term customer expertise, the theory of pulp making and the utilization of statistical mathematics in an innovative way. The real-time quality information provided by Botnia FOX can be used throughout the value chain to improve efficiency.

Technical implementation of the index is based on the Savcor Wedge Process Diagnostics System technology. The Wedge System was piloted at the Rauma mill in 2011, after which it was also introduced in Joutseno and Äänekoski. The system was installed at the Kemi mill in early 2013.

Metsä Fibre won the Finnish Quality Innovation competition with its Botnia FOX index in 2012 in the category of large companies.

Metsä Fibre is a world-leading producer of softwood pulp. Metsä Fibre's main products – sustainably and cost-efficiently produced softwood and birch pulp – are specially developed for the production of high-quality fine papers, magazine and tissue papers, and board. Metsä Fibre operates under the brand name Botnia. With four pulp mills in Finland, the company employs a total of about 800 people. Metsä Fibre's sales in 2012 were approximately EUR 1.3 billion. Metsä Fibre is part of Metsä Group.

Wedge training at the Kemi Mill. Mika Suojärvi from Savcor Forest and Jukka Rantamäki and Kimmo Kolehmainen from Metsä Fibre Kemi Mill. Photo: Metsä Fibre.

Paroc Invests in Best Practices

Savcor to deliver a Wedge system to eight plants

A Finnish insulation producer Paroc Group Oy invests in production efficiency by ensuring rapid process performance improvement with the help of Savcor Wedge Process Diagnostics System.

Paroc has acquired the Wedge System for eight plants in five countries wanting to make sure best practices are shared in the company.

The cooperation between Paroc and Savcor Forest began in autumn 2010. In June 2012, Wedge delivery contract was signed covering all eight Paroc base insulation material plants: Parainen, Oulu and Lappeenranta in Finland, Trzemeszno in Poland, Hässleholm and Hällekis in Sweden, Vilnius in Lithuania, and also Paroc´s new plant Tver in Russia, under construction.

- In our opinion the Wedge System is easy to use, fast and visual. In this system it is also possible to easily combine data from different sources. There are powerful and extensive analysis tools in the Wedge, says Production Technology Director Mr. **Tommy Lindgren** from Paroc´s Base Division.

- It is also important that time shift compensations inside the process are easy to make for efficient analysis.

The first Wedge was delivered to Poland Trzemeszno in autumn 2012. The remaining installations to other factories will be done during this year. According to Mr. Lindgren, the Paroc´s user feedback has been very positive in Poland and on other sites.

- In addition, we think there is a great potential in Wedge to be used also in monitoring other things such as energy efficiency.

”Wedge System is easy to use, fast and visual.”

In the beginning of this project Wedge was presented to all plant managers in order to get people acquainted with the system. Paroc found this information and trial use important step before investment decision. User training and support in application development are important project phases.

Trzemeszno plant in Poland. Photo: Paroc.

Tommy Lindgren.

Cooperation meeting at Paroc Parainen office in March 2013.

Good cooperation

Both companies have found the cooperation good.

- The cooperation has been smooth and we have received all the help and support from Savcor we have needed, says Mr. Lindgren.

- Paroc´s process development staff has been very professional. Contract agreement, as well as practical arrangements proceeded fluently, and the project has progressed according to the plan, says **Ilkka Rautiainen**, VP of Business Development at Savcor Forest.

Both companies see great possibilities for extending the cooperation in the future.

The stone wool insulation is produced by melting different stone types. Melted stone is fiberized and binder is added resulting primary mat. The primary mat is then folded to a secondary mat, which is cured, cooled and cut to required sizes and shapes. Slabs are then packed and ready to be delivered to customers.

Paroc is the leading manufacturer of energy-efficient insulation solutions in the Baltic region. The cornerstones of the operations are customer and personnel orientation, constant innovation, profitable growth and sustainable development. Paroc products include building insulation, technical insulation, marine and offshore insulation, construction panels and acoustic products. The products are manufactured in Finland, Sweden, Lithuania and Poland and, starting in 2013, also in Russia. The company has sales and representative offices in 13 European countries. In 2012, its net sales amounted to €430 million and it employed an average of 2019 people.

Photo: Paroc

Systems Scale With Your Business

New Savcor Meka ERP User in Versowood

Versowood Group as one of the leading Finnish private owned producer and processor of solid wood is a long-term partner of Savcor Forest. Versowood uses the Savcor Meka ERP System, which is easy to extend when a company grows. Versowood´s newest Meka ERP user is A. Jalander´s pallet factory in Muurla, Finland.

Versowood´s and Savcor Forest´s cooperation that covers the entire supply chain began already more than ten years ago. As Versowood has grown by acquisitions and organic growth the cooperation has broaden and the ERP system has been scaled accordingly. Over the years many new plants have been added to this business-critical system. More than 20 Versowood plants are using the system at the moment.

- Mutual positive attitude towards innovations, industry expertise, and customer focused mindset have been the key factors to a productive partnership also in challenging times and have always guaranteed the best results, says Mr. **Ville Kopra,** CEO, Versowood Group.

New plant level for A. Jalander

A.Jalander´s pallet factory produces pallets and wooden packaging. The renewal of the ERP system was started at the factory in spring 2012. Analyzing a customer´s needs is always the first step in system customizing. The system must be flexible and must take into consideration the new plant´s products and product types.

Development of the pallet factory´s ERP system differed from the corporate´s previous system establishments because a new plant level was created for the factory. From now on two or more plant levels, instead of only one level, can be created in the ERP system, which enables both factory and corporate level monitoring in the Business Intelligence reporting.

Almost all of the functions in the pallet factory´s ERP were renewed by the Savcor Meka ERP. However, the project did not involve Kokkola shipping clearance operations, which is also part of A. Jalander´s business.

Smooth cooperation

Smooth cooperation and open dialogue are crucial when delivering a system to a new customer or plant, in order to adapt the system to meet a customer´s needs as well as possible.

Open communication is needed in merging customer´s needs (for example product and operation information) and the system potential (for example operating principles and information input).

Vesa Rantanen, System Specialist from Versowood, and **Sanna Leskinen,** Project Engineer, from Savcor Forest, were the Project Managers in this project.

- Working with Savcor went smoothly, and we shared the same understanding of cooperation with Savcor´s project manager. Savcor´s special advantage is their industry expertise, says Mr. Vesa Rantanen, who also had good development ideas during the project.

”Savcor´s special advantage is their industry expertise”

Photo: A. Jalander.

Photo: A. Jalander.

- Cooperation was good. Vesa Rantanen has a long system experience, which was very useful in the project. He was able to challenge us in a good way in the project. Such feedback is always welcome, to enable us to develop our processes to the right direction. Pallet factory´s personnel was also very active in getting familiar with the system features and found an appropriate way of using the system especially for their business model.

Implementation proceeded according to planned schedule. The start-up was speeded up by professional project managers, background work done at Savcor, pre-existing parameters as well as information on new parameters, products and customer data, input into the system in advance.

Training for the A. Jalander personnel was carried out in late 2012, and the new system was started at the factory in January 2013.

Photo: A. Jalander.

A. Jalander Oy is a part of the Versowood Group. A Jalander produces standard pallets, that is Fin- and Eur-pallets and also PRS-pallets (pallet return system) used mainly by chemical industry, as well as customer related, tailor made no-return pallets, which can be stamped for export with a ISPM 15 stamps. In order to serve customers the best possible way, the production range includes also pallet collars, packing covers and packing plywood, cut to size and stamped, if required.

Anu Kettunen, Dr. Tech, Senior Application Specialist, Microbial Analytics, ***Savcor Forest Oy***
Marko Lauraeus, PhD, MBA , Product Manager, Microbial Analytics, ***Savcor Forest Oy***

Safer Water Circulations With Microbial Measurements

Nowadays, water circulations in industrial processes are increasingly vulnerable to microbial challenges. Environmental awareness and economic efficiency imply a tendency towards more closed water circulations, more moderate process temperatures and lower biocide usage. These all favor microbial growth with many adverse consequences.

Many bacteria produce slime, increasing system viscosity, decreasing flow rates and resulting in extended wear in pumping stations. Also other material present in process waters prone to attach to microbial slime further increasing flow resistance.

Microbes also attach to metal surfaces forming biofilms. Biofilms protect microbes from all kinds of controlling actions: they become much more resistant to washing procedures and biocide control. Microbiological fouling of circulation systems creates highly insulating surface covers and thereby effectively blocks heat exchange.

Furthermore, bacterial biofilms induce corrosive processes via their metabolites and thus increase maintenance needs.

Biofilms also provide a suitable environment for pathogenic organisms, especially for Legionella. It is hence essential to understand microbial dynamics to guarantee occupational safety and safe maintenance of the water systems.

Rapid and easy standard service

Savcor QuantiFire offers service packages to analyze the microbiological status of process waters. The service provides information on microbial numbers and risks related to biofilm formation, corrosion and occupational health. In addition, the results often indicate potential origin of microbial contaminants, and thereby help to control their growth.

QuantiFire standard service package includes 10 individual analyses covering total number of bacteria as well as main biofilm-forming, slime-producing, spore-forming corrosion-inducing bacteria and the most relevant pathogens in typical process waters. This package helps clients to understand and manage the microbiological conditions of the water circulation process. The service is provided in easy format. The client requests a number of sample vials. Sample vials typically arrive within couple of days and can be directly sent back to QuantiFire after sampling. The analyses are carried out and reported to client by e-mail.

Complete characterization of microbes in client process

Differences in raw waters, process conditions and microbial control protocols make every process unique. Consequently, unique microbial contaminants prevail in each process. Clients who want to understand in detail microbial dynamics in their specific process benefit from Savcor QuantiFire complete analytical service package, which includes complete characterization of process microbes, tailored panel and specific sampling protocol.

In complete characterization of process microbes, QuantiFire applies taxonomic sequencing technology on client process samples, enabling species level identification of every microbe in the process. Thereafter, an optimal quantifying method is selected and designed for 10 most important microbial species or clusters. Adjustment and development of the methods to meet client needs is carried out using QuantiFire assay design platform. A specific sampling protocol including relevant analyses is implemented into client process to enhance process hygiene maintenance.

Advantages of QuantiFire technology

Savcor QuantiFire has a proprietary sample storage and delivery technology. It stabilizes the microbiological samples at ambient temperature and thereby allows delivery of samples via ordinary postal services. Therefore, clients can pre-order sample vials from QuantiFire, collect samples when most convenient and send them to QuantiFire without needing to be troubled of sample spoilage.

Microbial quantification is based on real-time PCR. Over 15 year of continuous development of PCR methodology by QuantiFire ensures highly accurate and reliable results.

QuantiFire exploits laboratory automation, and therefore results are available typically within 48 hours from the sample delivery. Even faster schedules are available on request.

Why is it important to follow microbes in water systems?

Process and cooling water systems imply an occupational risk, especially under maintenance periods. Even small leaks or aerosols can contaminate the whole plant, including the end products.

More global operational framework with a wide variety of raw materials continuously induces new potentially pathogenic microbes into water circulation systems. An example of this is a Chlamydia-related respiratory pathogen recently isolated from Spanish process water systems. These new pathogens result in unforeseeable consequences to occupational safety.

Microbial growth can cause significant destruction in the system both through corrosive processes and slime formation damaging the pumps. Effective controlling actions require microbiological knowledge and analytics.

Even though biocides are an effective way to control microbial growth, they are often used non-optimally when their usage is not based on relevant microbiological analyses. In the worst case, selected biocides can even enhance microbial growth if the selection is carried out without knowledge on process microbiological status.

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