

Taking mills from start-up stress to start-up success

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From Ashland Water Technologies to Solenis

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Solenis has been busy the last few months completing its transition from Ashland Water Technologies into a stand-alone process and water treatment company. As the business proceeds through this new phase, employees understand firsthand how stressful — and how daunting — it can be to start up a large, complex enterprise. Paper mills face similar issues when they bring a new machine online and up to full production capacity.

According to Alistair Diack, Regional Marketing Manager for Solenis’ tissue and towel business, no chemical supplier understands the unique challenges of start-up projects as deeply as Solenis. “Our new name comes from the word solution,” he observes, “because delivering solutions to tough problems is what we’ve been doing for more than 80 years.”

Since 2010, Solenis has tallied over 100 successful start-ups and has installed coating packages on more than 500 machines globally. The company believes that it understands what it takes, from a chemistry perspective, to start up a new

machine or rebuild an existing asset, and asserts itself as a start-up partner for many tissue manufacturers on projects with advanced production requirements, such as TAD (Through Air Dry) and hybrid structured sheet assets.

“These assets present unique challenges, particularly in the area of Yankee coating and fabric release,” Diack says. “Solenis specialises in these complex start-ups and considers all of the necessary details, such as design of the Yankee cylinder coating unit based on cylinder dimensions, machine speed, cylinder surface and much more.”

PEOPLE ARE A KEY PART IN THE PROCESS

Picking the right products requires a dedicated team of experts — and a careful, considered approach that begins long before a machine is planned to start. Solenis assigns a project manager to each installation who serves as the primary liaison between mill staff and Solenis. Each project manager leads a start-up team consisting of applications specialists, with detailed knowledge of chemistry systems, equipment specialists, with training in mechanical and electrical engineering, as well as employees with a strong papermaking background. This team collaborates with key mill personnel to understand the integrated technologies and then develops a comprehensive start-up plan that includes selection of appropriate chemical applications, dosing and monitoring equipment, storage needs and operator training.

These start-up services are backed by Solenis’ experience in the global paper and pulp industry. “We have extensive knowledge of industry best practices,” says Diack, “and we have developed proprietary predictive tools and process simulation capabilities — including adhesion release testers, crepe simulators and dynamic TAD release testers — to help tissue mills design customised programmes, minimise risk and maximise outcomes. These capabilities help us to confidently recommend start-up chemical packages, especially in the area of Yankee treatment, to protect the new asset and ensure great runnability from the first day of production.”

RIGHT PRODUCT, RIGHT DOSE, RIGHT TIME

Solenis’ R&D and application expertise aids the design of start-up chemical packages for customers, and by taking

Solenis Chemical Offerings for Tissue Makers

SOLENIS BRANDS	CHEMICAL APPLICATION AREA
Crepetrol™	Yankee Coating
Rezosol™	Yankee Release
Rezosol™	TAD Fabric Release
Kymene™	Wet Strength
Hercobond™	Dry Strength
ProSoft™	Softener/Debonder
Zenix™, DeTac™	Deposit Control
Spectrum™	Microbiological Control
PerForm™	Fines Management
DeAirex™, Protocol™	Defoamer
Kybreak™	Broke Repulping
Dimension™	Converting

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a total chemistry approach, the company can provide a comprehensive solution for new assets, regardless of size or configuration.

This encompasses functional chemistries such as creping adhesives, coating modifiers and strength additives; process chemistries by specifying appropriate microbiological and deposit control technologies, defoamers and cleaning products as part of the start-up programme so that they are ready for use if required; and water-treatment chemistries. The latter requires consideration of aspects such as boiler water and steam system treatments to protect the Yankee internals; coating and release applications to protect the Yankee surface itself and to ensure a quality coating is applied within a wide operating window; and whitewater recovery polymer applications to ensure high-quality water is returned to the machine.

Solenis also offers a portfolio of proprietary OnGuard™ sensors, analysers and controllers that allow for around-the-clock monitoring and control of process and water treatment programmes. When used in conjunction with Solenis’ process and water treatment chemistries, these systems ensure the optimal performance of the treated system, minimising water and energy costs, reducing downtime and providing long-term asset protection.

SMOOTH START

Once a chemical programme is determined, Solenis works with mill staff to test it for performance and runnability on the new machine. This involves evaluating the machine’s overall functionality, tuning settings on distributed controllers and

establishing recommended dosing rates. The testing can last several weeks or even months, but enables the start-up team to analyse the paper for multiple end-use properties and finalise formulation and grade specifications.

“One area we watch carefully,” says Diack, “is the Yankee dryer. Our teams monitor both its chemical and mechanical performance to ensure optimal protection and operating conditions. Through this entire start-up process, our primary goal is to increase the efficiency of the machine so that the mill can achieve its quality and sales goals as rapidly as possible.”

Solenis continues to provide ongoing support after the machine’s production has stabilised, checking conditions, fine-tuning machine settings and providing application monitoring services. The company also offers on-site training before, during and after the start-up process, as well as pilot scale testing prior to programme selection.

“Solenis isn’t just a chemical supplier,” Diack concludes. “We’re a dedicated partner to tissue and paper mills looking to expand their business with new installations or upgrades to existing assets. As a partner of choice, our number-one priority is making sure that all chemical applications are ready to start on time and help our customers reach full production targets as rapidly as possible.”

In South Africa, Solenis has an exclusive distribution and manufacturing agreement with Chemisphere Technologies. Solenis provides technology and applications knowledge to Chemisphere’s experienced team in the paper industry, ensuring the benefits of Solenis’ technologies and how to apply them using best practices are employed. ■