

# HOW TO INVEST SAVING ENERGY AND MONEY

Innovation  
become true  
with  
SAEL ...



**NEW INVESTMENTS FOR SONOCO GROUP GRECE – KILKIS PLANT:  
INSTALLATION OF A NEW SECTIONAL  
INNOVATIVE DRIVE FOR PM1,  
WITH A WATER COOLING SOLUTION**



by: Palamidas/Andrighetti, BU paper automation electronic systems

*After a successful collaboration at the Stainland Paper Mill in the UK, the Sonoco Group has chosen for the second time SAEL for the overhaul of the paper machine drive at its Kilkis, Greece paper mill.*

**VW WATER COOLED SERIES  
with  
Safety Torque Off**



The **Sonoco Group**, a U.S.-based international company with over 165 facilities worldwide, is a global leader in packaging solutions. Sonoco excels in the production of high-quality tubes and cores, providing solutions and services to paper mills, construction companies, plastic fiber manufacturers, and metal film companies. Following a successful collaboration at the Stainland paper mill in the UK, working on the reconstruction of the entire PM1 control and the DCS

(Distributed Control System) of the approach flow, the Sonoco Group has chosen **SAEL** for the third time to rebuild the paper machine drive control at its Kilkis plant in Greece. The Kilkis project was a priority focus for SAEL, aligning with its goal of establishing strategic partnerships with major international paper groups. The space savings, reduced maintenance costs, decreased machine downtime, and significant energy savings

introduced with the water cooling solution have already proven the application's effectiveness, as it has been performing in the plant for over two years now.

## **SAEL AND INNOVATION, THE TECHNOLOGICAL GAP: ONE DRIVE PLATFORM WITH LIQUID COOLING**

Our liquid-cooled inverters, virtually free of tangential fans (one for each inverter), allowed the elimination of all the fans inside the electrical panels that were previously attached to each door, eliminating the maintenance of filters, too. The new electrical cabinets, where our panels are installed, once obligatory sealed and largely conditioned, now become normal rooms or areas near the motors, as the system is autonomously cooled. The double-front electrical panels where the inverters are mounted have a closed air recirculation, ensuring no contamination of



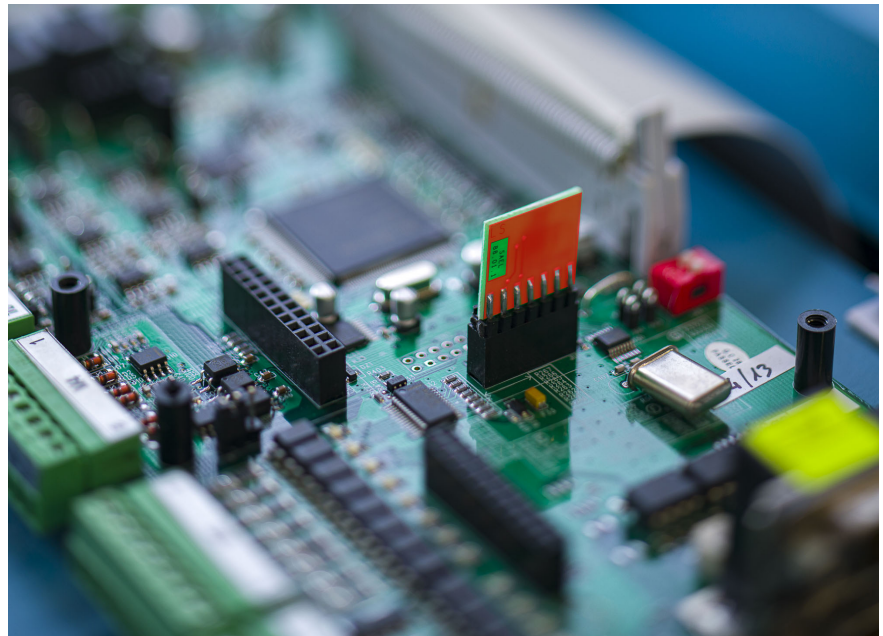
**Control Desk around machine – SAEL PLATFORM ONE DRIVE–**



**SAEL Cabinet: left the press in DC, right all the rest in AC – SAEL PLATFORM ONE DRIVE–**



dust, humidity, and air acidity; they perfectly preserve the internal electronics, electromechanics, and components over time. To date, SAEL has already applied this technology in several European paper mills, and after over 6 years since the first implementation, the internal components of the electrical panels still look like new. The experience gained and the excellent performance monitored over the years allow the paper mill to achieve significant annual energy savings: operating and maintenance costs of air conditioners, filters, and fans that are no longer necessary are eliminated, and heated water is recovered by reintroducing it into the pulp preparation circuit—especially during the winter. These topics immediately



**The removable memory mounted into every Board, allowing quick replacements, in case of faults, without settings.**

resonated with SONOCO's innovation-driven research, prompting them to commission the fifth WATER COOLING control in Europe.

#### **DCS in Drive SAEL**

Another peculiarity of the Platform One Drive architecture is the powerful plant supervision controller “DCS in DRIVE,” which, in the 2021 version, allows storing and visualizing any operation, machine status, and existing variable managed by the converters in the form of trends.



**View from Pope reel Machine 1 Sonoco Kilgis – SAEL PLATFORM ONE DRIVE–**





**Silent Drive, driven by our PLATFORM ONE Drives**



**Sonoco GR, overview from wet area**

It is a true engineering station from which, in addition to operating the plant, one has complete control by programming and parameterizing each individual drive, existing hardware, and PLC connected to it. From the outset, the customer has been able to appreciate the depth of this operating station, capable of storing everything that happens inside the SAEL electrical panels, also recording every single operation that operators perform in the field or that electrical maintainers make to the system. The technical management of the plant commented, "The new Water One control integrated with the DCS in Drive SAEL has immediately allowed a considerable increase in efficiency and machinability. The fine-tuning carried out by SAEL technicians has minimized disruptions caused by mechanical play, and the system's extreme versatility has adapted perfectly to the characteristics of the cardboard sheet and all the pre-existing parts of the plant. The excellent design and execution of the plant allowed us to start the system two days ahead of schedule, and the presence of SAEL technicians allowed us to reach the pope on the first tail threading. The "DCS in Drive" allows trending, recording, and comparing all the values useful for identifying process anomalies and any operating errors even remotely with the IWSA - Internet World Sael Assistance telemetry. Sonoco's





**The “PLATFORM ONE DRIVE WATER COOLED” are equipped with ONE Card (a single main board to control any drive: DC, AC and REEBORN). The Film capacitors ensure long life to the inverter.**

choice of SAEL was based on the extensive experience in automation in the paper industry, consolidating our position as one of the main players in this sector, not only in Italy but also globally and among the leading paper groups. The project was implemented within 15 days of the switch-off and restarted without problems, demonstrating the high value of our products. After months of operation, the paper mill is very satisfied with the results and can now benefit from a system that effectively controls the machine and promptly identifies potential alarms and issues, ultimately reducing machine downtime



**always with you**

