

ONE more time we are the first, after equipping the inverters with film capacitors and ONE card. It is time to water cooling system now. Once again... it is time for SAEL, the benchmark!



The “PLATFORM ONE DRIVE” by SAEL is the unique system which combines cost-savings and best performance ever. After rebuilding the PM1 and PM2 drives, SACI, assigned to Sael the rebuilding of PM3 – Installing the first water-cooled sectional drive system in Europe -

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SAEL AND INNOVATION: PLATFORM ONE DRIVE LIQUID COOLED

Fulfilling our mission voted to the “Spirit of Improving”, we applied the know-how achieved along the Tunnel Boring Machines experience, to our massive production drives. The working environment in which our inverters work in this sector, are among the most severe that can be encountered: very small spaces, strong vibrations and high temperatures due to the fact that they are placed in the vicinity of the eight 400Kw engines that carry out the rotation of the main drill, have driven our research and development team to create a water-cooled drive, extremely reliable, compact and strongly immune to thermal and mechanical shock; applied in well-protected environments such as the paper

mill, just a few months after start-up, it allowed us to sleep peacefully and to encourage massively the paper mills to be led towards this technology.

THE TECHNOLOGICAL GAP

Our liquid cooled drives, practically without tangential fans (one each

inverter), also allowed us to remove all the ventilation normally mounted on every door of the electrical cabinet. The new electrical cabinets where our panels are installed, previously obligatorily and abundantly conditioned, today become normal rooms, since the system becomes independently cooled. The double-sided electrical panels, where the

VW WATER COOLED SERIES with Safety Torque Off



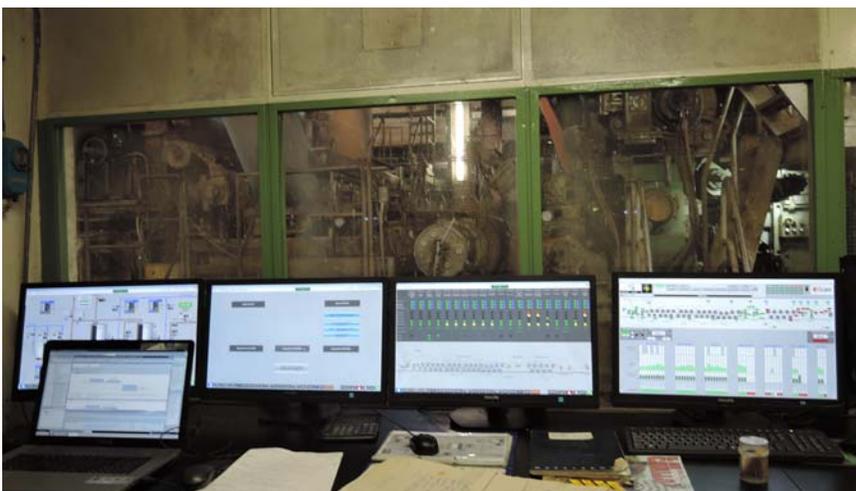
The Water Cooled “PLATFORM ONE DRIVE” inverters, equipped by the ONE Card (one card fits all: DC-AC-Brushless and Reborn) and Film Capacitors, ensure “infinite life” to the inverter itself.



Sectional drive electrical cabinet by the exclusive "PLATFORM ONE" drives WATER



Water-water exchangers with direct in-let from the well of water



Siemens 1500 PLC safe and Scalink DCS Automation of the Paper Mill

inverters are mounted, have closed air recirculation ensuring no contamination of dust, humidity and air acidity; they preserve over time, and in a perfect manner electronic, electromechanical and various components. The experience gained on the subject by the Tunnel Boring Machines and the excellent performance monitored over the years due above all to energy saving, will allow the paper mill to **save about Euros 60,000 a year**, eliminating the need for maintenance of the air conditioners and fans. For this reason and for the significant reduction of the dimensions that the system has obtained, driven by the continuous research of innovation of CARTIERE SACI in the search for products and systems with high technology and energy saving, we have made **the first WATER-COOLED** plant in the paper mill sector. In December 2018, respecting the tight deadlines of the stop, thanks to the organization and team spirit with the technical staff of SAEL - paper mill, we started the new paper machine sectional control along with the many mechanical transformations that have been carried out on the paper machine as well as having modified and also started-up the VARIDUR rewinder, reconditioned in mechanical and safety terms. The drive system dealt with the management of 46 AC motors of about 2MW of installed power; the realization, unique in its kind and coordinated with our DCS in Drive, both in paper machine and in rewinder, was strongly desired to equip the paper mill with all the qualities that our **PLATFORM ONE** offers today in the market.