



“PLATFORM ONE” di SAEL,

The drive-automation architecture expressively made for the paper mill: the choice of FERRARA papermill.

SAELsrl. FERRARA papermill

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Another innovative “Platform ONE” solution by SAEL. The high performing system - cost competitive - applied for **Cartiera di Ferrara**, that manages drives and automation. The paper mill approaches every investment carefully, selecting the supplier after a deep benchmarking. Over the years Ferrara papermill targeted its production to high quality papers, thanks to the SAEL advanced technology, too.

Ferrara papermill

In the last seventy years, Ferrara papermill is an integrated Italian company that produces high quality carton and heavy aims. The plant was born in the early Forty. At the beginning, the building was owned by Burgo Group and progressively renewed over the years; this allowed to keep the manufacturing processes high. Thanks to its continuous eco-friendly investments on innovative solutions, Cartiera di Ferrara is on of the today’s greats, on carton and aims production: either in Italy or in the Export markets.

Some typical issues of the paper mill

The drive is in fault: how long will it takes to restart? ... The drive highlights “encoder fault”: I changed it, but the machine does not restart. What it is. I can’t see if the problem comes from the Drive or PLC, or somewhere else ... Every time I encounter a non-usual

fault, I have to contact the supplier assistance to fix it... It’s 4 o’clock a.m., I must change the drive but I’m afraid to not do it properly ... I try to replace the board, but will I remember how to set all the parameters? I don’t remember what we did last time to solve the same problem.

How many times did the technicians

VW WATER COOLED SERIES with Safety Torque Off



The “PLATFORM ONE DRIVE” Inverters are equipped with the ONE Board (a unique board drives all the different applications: DC, AC and REEBORN) and FILM CAPACITORS – with infinite life-time.

have the same issues?

To clear any doubts, on 2011, SAEL launched in the market its platform “ONE Drive”; expressively made for the paper mill where every Drive (a.c.; d.c., brushless, chopper or reborn) used for continuous machine, winder, calander, wrapping, stock prep up to the end of the chain, is managed by a single hardware board – identical for all the applications -. The ONE board is supported by a versatile, and removable, memory card where all the parameters are stored: it can be easily replaced by un-expert personnel too. Any technical expert operation is required: no programming or parametrizations, no PC. A simple system with auto-diagnostic who helps the operator to quickly catch and see the faults.

The platform “ONE Drive” uses Inverters of the LONG-LIFE series – infinite life-cycle -. The Inverter components are carefully selected into this philosophy. E.g: Film capacitors with infinite life, vs.



traditional electrolytic capacitors with a maximum life-cycle of 70-000/ 90-000hours. Moreover, against the tendency of the big players – who look at the inverter as a commodity to be replaced after few years, not so far from a domestic tool - the

SAEL drives are studied for a quick maintenance. In the presence of faults, the most known players are used to go for complete substitutions instead to repair: somehow it is the typical way for introduce new series after few years, only. A clever idea



THE CONTINUOUS MACHINE ELECTRICAL CABINET, MADE IN DOUBLE END TO REDUCE THE DIMENTIONS.



DOUBLE END INVERTERS MOUNTING, FRONT VIEW

to create confusion in the head of people, obliged to purchase tons of spare parts. Cartiera di Ferrara had the same issue in the past: that's why they went to SAEL solution !

Our philosophy is different: we do believe on remote assistance and the "DCS in ONE Drive" features keeping under control everything. Since 2011 it is our gold card, saving costs solution, highly appreciated and awarded by the customers.

The Ferrara papermill main drive is the best example of the concept mentioned above: the technical manager – Eng. **Alessandro Castelletti** – together with Eng.

Stefano Spigarolo and **Matteo Ciabattari** developed a flexible and economical investment plan for the Continuous Machine (**with SAEL Drives**) working on the safety section of every machine part, too.

The SAEL implementation

The job was huge. A global transformation focused on production increase. The new implementations on Slice Roll, Wire table, Shoe press and Dryer section – enlarged and switched to the silent-drive technology, were made in 15 working days. This big achievement paid off all the efforts made.

Some highlights: 1,6 Megawatt installed with 33 inverters and 35 motors supplied; the inverters – in term of sizes - have been compacted reducing to a couple of units the number of spare parts. Two redundant DCS stations for the main drive and machine control, with high sophisticated tools to track and understand every move made by the operators in case of paper brakes. To monitor and drive each motor Five Pulpits with operator panels (in redundancy to the DCS) are installed, allowing the operator actions in case of DCS crashes.



The unique regulation board for all our drives "PLATFORM ONE DRIVES": DC-AC-BRUSHLESS-CHOPPER and REEBORN (the smart device applicable to every drive and brand, in order to replace old drives)





Control Panels and Command Boxes, "PLATFORM ONE" by SAEL, long life to your Drive

Beside the typical drive control actions, the "DCS in DRIVE" permits to recall old recipes, saved years later, at the present days, having the original sets – this operation is available by the "saved set point" function -.

The DCS system integrates the "alarm help" function, too. This is a very useful function because the operator can easily store and edit his comments for each alarm occurred, keeping track of any process done to fix the problem, eventually. A great tool that helps the not high skilled and prepared maintenance person to restart the machine in case of faults. Another advanced tool is the "MAIL or SMS" alert message: in this case, every anomaly stored, is immediately communicated via txt message to the users, ensuring a quick intervention. It does not matter where the operator is, because this smart function, advises the operator in real time; simply with his PC + internet connection he can dial in and fix the problem – The "LITE TIME CLIENT" license is included -.

All the visualizations and operations made through the two PC of the machine control, can be accessed ad Client, as well as by an external device for a maximum of two hours



Pope Control Panel

– free of charge, no licenses are required -.

Box SAEL:

Specialization in the Paper Industry

SAEL operates from 1987 in the sector of industrial automation, as a designer and manufacturer of electronic control and regulation products and equipment for machines and plants in various sectors. The sectors in which has more experience and numerous applications are: Paper Industry, steel industry, wire industry, plastic and tires, machine tools, special machines. In particular the paper and related industries are for SAEL fields of strategic intervention. Strong experience and high technological solutions and innovations, offers to its customers Hardware and Software architectures directly linked to the requests proposing diversified solutions aimed at optimizing costs, management and quality. The activity is based, in addition to the new, on the rebuilding of all the electronic automations in which, in some cases, it is possible to reuse also the power of the existing converters and the electromechanical drive part. The specializations in this



sector are: sectional controls with DC, AC and mixed technology; additions of motors on existing drives; Coaters in line and offline; conversions of analogue cascades to digital; calenders and supercalandres; Stock preparation with PLC or SAEL technologies; winders and slitter rewinders; synchronous or fixed blade sheet cutters; pope reels and unwinders.



The "PLATFORM ONE DRIVE" Inverter is made for Paper Mill Industry. They are the most innovative solution in the market. Their mission is the long life, and easy to be repaired; flexible and easy to drive. All our drives are equipped by the ONE Card – A Single board fits all the drives: DC, AC, Brushless and Reborn -, Film capacitors for a long life inverter.

