

GREATER QUALITY WITH LESS CONSUMPTION

Following a major plant modernisation venture, one of the Italian facilities of the multinational WEPA succeeded in its intent to obtain greater productivity, an increment in efficiency, and optimisation of the work spaces. A project founded on Toscotec Group's ability to meet increasingly high operational demands and requirements.

Source: Industria della Carta by Gianandrea Mazzola

Toscotec S.p.A. is involved in the design and production of turn-key plants and machines as well as the supply of components and services dedicated to the paper and tissue industries. It can boast innovative technologies and a wide array of solutions that have allowed the Group to consolidate an increasingly notable position on a global level. A growth that, in the course of the years, has seen the development of installations at the production units of major market players, like in the case of WEPA, the German multinational, for whom the company brought to term an important modernisation project of their production unit in Cassino (FR), a facility that produces kitchen towels, toilet rolls, handkerchiefs and paper napkins.

"In 2010," confirms Maurizio Lattanzi, Plant Director of WEPA Italia S.r.l. in Cassino, "the company embarked on an intense plant modernisation programme to replace technologies that had become obsolete and were no longer aligned with market demands."

And so began the quest to achieve a new level of competitiveness pursuant to the prerequisites set forth, through the attainment of a greater productivity and quality of the product, in addition to an increment in efficiency. These, in synthesis, are the goals that Toscotec set for itself in developing the project that materialised first with the rebuild of the machine from TiscoFormer to CrescentFormer, which took place in 2010, secondly with the reconstruction of the Hoods and Air Systems operations department and lastly, just one year later, with the rebuild of the stock preparation plant.

Higher speed, greater efficiency

As mentioned, the first part of the project entailed the rebuild of the machine into CrescentFormer, which took place in 2010, with a technological-production and energy alignment that yielded a substantial increase in operating speed, in productivity, and also considerable energy savings. An engineering feat that in the case-in-point yielded better sheet formation, improved format and basis weight management, in addition to an optimised and simplified forming belt unit for WEPA.

"Simplification", underscores Lattanzi "also in consideration of

the presence of the single wire in the CrescentFormer configuration, together with a new wire/felt run and their reciprocal detachment, rendered optimal. From a production point of view, performance, too, was considerably improved."

The adoption of the new-generation drying system in 2014 definitively solved previous issues tied to structure and safety, but at the same time yielded suboptimal energy efficiency. The new configuration entailed a new Toscotec TT Milltech-SMYH (Smart Duo System) hood in winding on a 5-m diameter Yankee. This synergy benefitted also from the fact that the paper mill works in cogeneration modes through gas turbine (hence producing electricity but also steam). To facilitate the attainment of higher efficiency and reliability is also the change championed by the mill with the passage from DC power supply to AC in drives and actuators.

"Another intervention", reveals Lattanzi, "carried out by Toscotec in agreement with WEPA, was to bring the Air System outside the machine hall. This decision certainly resulted in greater operating safety, as well as simpler maintenance operations, minimising the risk of accidental fires."

Maximum flexibility in stock preparation

Last year, the Cassino plant saw the conclusion of the rebuild project dedicated to stock preparation from virgin fibre. This intervention proved the engineering abilities of the entire Toscotec technical staff, in concert with WEPA, to define an advanced process in terms of operational flexibility but also from the point of view of the space occupied by the plant. A compact, optimised layout achieved also thanks to the choice to adopt the Toscotec TT Mix mixing system (Toscotec patent). A focused decision that allowed minimising the installation of some elements (actually completely eliminating the mix tank) and making format change in the production process more flexible and faster.

"Thanks to this new technology", adds Lattanzi, "today we can make a format change in just a few hours, compared to the 24-26 needed before with the old plant configuration.

A decisive benefit in terms of competitiveness."

A tangible adaptation was also made on long fibre line refine-

ment and on the portion that concerns the deflakers on the short-fibre line, with a resulting boost of both process phases. "All this", continues Lattanzi, "together with upgrades on the broke line, has led to an overall 30% lower electricity consumption compared to the initial configuration (hence dating back to before 2010, A/N) and a savings of about 35% in water and stock volumes. Basically, lower plant operation costs and better management of the entire process."

The numerous interventions performed by Toscotec have, in the course of time, led to a modernisation of the production unit in Cassino. A clear demonstration of how important it is to

be able to utilise the services of a qualified supplier, capable of supporting its customers not only through the sale of plants (or parts thereof) but also to flank him in co-design with the scope of attaining increasingly ambitious operating goals.

"Goals", concludes Lattanzi, "that today mean greater productivity, estimated in +14% compared to the previous configuration, in lower total consumption, quantifiable in a decrease of 30% and, without a doubt, in improved quality of the final product that allows our company to further raise its level of competitiveness.

