

TECHNICAL PAPER

Flexibility and innovation drive the progress of Novimpianti

The Paper District of Lucca and surrounding areas is the cradle of know-how and technology for paper production and converting machinery and processes. Established in 1983 and today still run by its founders, Novimpianti represents the ideal partner both for producers and paper machine manufacturers, offering aerothermic process systems and auxiliary equipment. In 2002, as a consequence of its strong growth, the company invested in its new premises in the town of Martia (10 km from Lucca), headquartered in 5,000 square meters of the overall 20,000 of available floor space. Engineer Saccomano, President and founder of the company, speaks to us about Novimpianti.

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Enriched by a working experience in the USA that spanned from 1974 to 1981, Saccomano molded Novimpianti according to values and concepts that were innovative even for the time. And so it was decided to call the company Novimpianti, through the incorporation of the word "new" in its name. According to its founder, the concepts on which Novimpianti was established and structured can still today be translated into "ingenuity and knowledge", and these features are supported by remarkable intellectual energy and innovative skills as he himself states: "People and technology, that is, entrepreneurship supported by the ability to continuously improve, are the main ingredients of the development and success that the company is currently enjoying. Our vision and strategy were developed by a young and dynamic team of engineers and managers who consistently contribute to the company's growth by actively taking part and supporting it in order to develop and profit. This has consented us to propose innovative products and offer reliable service time after time. If on the one hand our vision and strategy are very clear-cut, on the other, we must point out how highly sensitive Novimpianti is, and has always been, to technical and management training, investing in both our managerial and operational staff."

THIS PHILOSOPHY HAS YIELDED A VERY EFFICIENT AND FLEXIBLE MANAGEMENT and has also enabled the company to constitute a team whose common goal is the sharing of know-how in all productive processes and the quest for operational excellence. These are fundamental concepts in the creation of value for the products and services offered in terms of quality, punctuality, performance and assistance. And excellence is also evident in the human resources present in the company: approximately 50% are highly qualified engineers involved in the design and development of products in the realm of drying, ventilation, the environment, savings and service, focused on meeting the needs of its commercial partners and those of the market.

QUALIFIED HUMAN RESOURCES COMBINED WITH LATEST-GENERATION TECHNOLOGY that ensure precision and efficiency in the production of special structures, as well as large spaces dedicated to logistics, are the bases which have consented Novimpianti to detain three production records in the last three years: the design, manufacturing and supply of 36 Yankee hoods for tissue and industrial papers; 55 steam and condensate systems; 23 dust and mist removal control systems.

"The strive to improve the quality of our products and the intent to offer unique, tailor-made systems have set the foundations for concretely investing in processes that allow us to have a standardization based on a common platform for each type of product, in full respect of specific customer requirements," Eng. Saccomano explains. A concept typical of mass production, modified by the company to meet custom-built product requirements, has resulted in an increase in efficiency while maintaining the uniqueness of the product and allowing the company to become more competitive;

this confirms the company's total "customer orientation" policy.

"OUR RANGE OF PRODUCTS IS FOCUSED ON FOUR MAIN LINES: drying; Yankee hoods for tissue; enclosed hoods; high efficiency Booster hoods for slalom and steam and condensate systems. With regards to Yankee hoods,

Novimpianti is among the manufacturers with the highest number of high temperature hood (650°C) installations made, with five units in operation at present, one started up in 2009 and another start-up expected in the first months of the year," underscores Saccomano.

The latter supply included the Cross Nozzles Box technology and consists in a hood structure for 5,600 mm format tissue for a machine with a production of over 230 tpd. Very satisfying results also with the steam and condensate system for the new PM15 at Visy Paper in Arizona, USA, for a 5,650 mm format and production of 1,000 tpd of fluting and test liner. PM10 was started up in Australia at the beginning of the year, for a 6,750 mm format and production of 1,300 tpd of fluting and test liner.

Research and development and the newest vanguard solutions must surely focus on the environmental issue, something which has always been kept in top consideration by companies and that needs to find even more concrete application today. With this in mind, Novimpianti proposes tissue dust and mist removal control systems to the market.

The recent installations of such systems in Italy, Indonesia, Romania, China and other countries are based on a consolidated technology, both for capturing dust and elimination at moisture level. These systems, based on required guarantees that go from 5 to 2mg/m³ of particles, are designed for detection through highly efficient suction boxes and TD blowing systems for machines and with lateral suction during tissue break phases for maximum dust elimination. The "Blowing and Sucking Box", a new concept, blows air on the sheet and simultaneously suctions up the volatile fibers. In full respect of precise warranty conditions, the system is compartmentalized based on the presence of the Yankee hood, to better control available spaces and avoid dust emission. Dust control and removal systems for tissue rewinders are renowned for their efficiency and ease of operation, such as the one recently supplied to ICT Iberica, part of the Italian Industrie Cartarie Tronchetti group. Novimpianti not only focuses on the environment, but also on energy saving.

Through their innovative Yankee EcoSteam technology, combined with a heat recovery system, Novimpianti underscores its commitment in the quest for new technology aimed at energy saving. In May of last year, Cartiera Confalone of Maiori, in the province of Salerno, Italy, started up its first Yankee EcoSteam system producing 80 tpd of tissue. The Novimpianti-patented EcoSteam system produces 1,600 kg/h of steam for the Yankee by recovering heat from the fumes extracted from the high temperature Yankee Hood at 650°C of air blown in. This new system combines a high quality product that comes from the presence of the Yankee hood, with the need to reduce specific consumption. It is comprised principally of a burner designed specifically for heat transfer of the two-phase fluid, of the steam separation unit with recirculation of the supply condensate, and of the interface unit with the traditional make-up burner. Pay-back time is of less than a year, making the installation of the Yankee hoods at 650°C convenient and favorable, considering that their specific consumption is lower than that of the traditional Yankee hoods at 530°C.

NOVIMPIANTI'S VISION AND MISSION consist not only in the production and installation of highly technological systems that answer the specific needs of producers, but also in the supply of quick and efficient worldwide service for spare parts, surveys, diagnostics and maintenance. Maximum productivity and efficiency with minimum specific consumption by paper production machines and systems provided by Novimpianti are the main objectives of the company's Service Team, comprised of experts that account for 10% of its resources, for an investment that guarantees customers reliability, quick response, precision in the interventions requested and constant feedback monitoring. This ensures constant updating and improvement of the technology provided.

Novimpianti's dynamic spirit, flexibility and optimism are embodied through innovation.

This is the philosophy that has distinguished the company from the start, and that – despite the presence of signs that may not be too positive from the economy and the incidence of energy costs – confirms its optimism for the future, through the words of its president. "Novimpianti is not exempt from the current economic situation, but the company believes it has the fundamental characteristics required by the market today in order to win this global challenge. During our 27 years of business history, we have faced unfavorable periods before, but we have reacted with determination, the capability and flexibility to adapt and to deal with the new and different needs of a market in continuous evolution".

At Novimpianti, balanced doses of pragmatism and optimism are the energy necessary to continuously and constantly innovate. •

Technological innovation is paramount for this company.

Its team of professionals is totally committed to the research and development of new technical solutions. In these past years, new systems have been designed and perfected. Among the most recent:

- A. R. Booster Hoods on slalom in the pre-dry machine section for industrial and special paper types. Special design features avoid damage risks to wires and felts and also avoid accumulation of fibers on the suction roll of

the Booster hood.

- Yankee Hood for tissue machines using the gas turbine exhaust pipe to provide the paper with blown air.
- Yankee EcoSteam, still in its embryonic phase, a system designed to increase the opportunities for installation in paper mills.
- Cross Nozzles and Blow Box Technology. Together with the consolidated technology of blowing air by means of a blow box, for several years now the company has also been proposing the Cross Nozzles solution, both in the standard version at 530°C and in the 650°C solution. This latter technology is now consolidated since numerous applications have already been made to existing Yankee hoods.
- “Built-in” Yankee Hoods at 550°C. This product is suitable for limited-space tissue paper mills where top tissue machine performance is still a fundamental request. The biggest challenge was to solve the inconveniences typical of this type of product (for example, maintenance of in-line burners, of the electric fan motors for the elimination of dust and moisture in the environment). In the last 5 years, Novimpianti has installed four such hoods.
- Yankee Hoods with Alternative Fuels. The company’s R&D department is involved in the research for a system to heat up the air blown into hoods suitably designed for fuels available in emerging countries, through an “ecological” system that has a low impact on the environment and extremely low polluting emissions.