The headquarters of Simpec Srl in Nova Milanese, near Milan (Italy).

HIGHLIGHT OF THE MONTH

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Simpec: Water Treatment Solutions for a Wide Variety of Industries

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Waste water treatment technologies are one of the core elements of the circular economy: they offer the chance to recycle process waters or, at least, to limit water consumption. Simpec Srl is one of the historic companies in the field of waste water treatment systems intended for a wide range of industries, particularly the aluminium one.

The treatment of coating waste water is an anything but generic subject. There are dozens of companies operating in this specific sector in Europe, which over the years have specialised in the purification of water coming from pre-treatment stations and the overspray abatement veils of liquid coating booths. The technologies they offer are always geared towards recycling water, limiting its consumption, and minimising the waste to be disposed of – in two words: circular economy.

Treatment technologies for booth waste water include skimmers, dirt separators, and sludge dewatering systems, whereas the plants

devoted to the treatment and recycling of chemical pre-treatment water are normally chemical-physical, adsorption filtration, ion exchange resin filtration, and biological purification systems.
Simpec Srl was established by Ferdinando Bottini in 1993. It currently has about 40 employees and operates from its new headquarters in Nova Milanese, just outside Milan (Italy).
The facility boasts over 600 m^2 of technical and administrative offices and almost 1000 m^2 devoted to production and the in-house laboratory. This is used for basic analyses, whereas for more in-depth analyses the company relies on its subsidiary Tecnologie d'Impresa Srl (Cabiate, Como, Italy), which, with a staff of more than 150 employees, audits management models and systems for firms and public administrations in the fields of safety, the environment, quality, social ethics, and food hygiene.
Initially, Simpec mainly manufactured treatment plants for the electroplating and coating industries. Then, many years ago, it began to diversify into the pharmaceutical, food, mechanical engineering, and other sectors. Over time, it has also specialised in membrane plants and biological and chemical-physical systems for the treatment of primary, process, and waste water.
One of Simpec's main target sectors, as export manager Andrea Bottini explains, is aluminium, especially profiles and coils for architecture and industry.
"There is currently a lot of demand from the aluminium sector. We are building a large plant for a company in Bulgaria for the treatment of water coming from a vertical profile anodising and coating plant. It consists of a 30 m^3/h chemical-physical system and two demineralisers capable of treating 15 m^3/h of liquid each (in a closed loop) to feed the demineralised water rinsing stations. We have recently developed another plant for a US company, in Colorado, for the purification of pre-treatment water from a horizontal coating system devoted to aluminium profiles."
"Aluminium is becoming increasingly popular in many sectors," adds Bottini.

Andrea Bottini.

A part of Simpec's internal laboratory.

"In the packaging industry, for instance, this noble material is replacing plastic. In the food sector, aluminium is being increasingly used in a wide range of applications, in the form of both cans (for the food & beverage field) and coils (used for canned goods or bags and packages). A surprising aspect is that hexavalent chromium-based chemicals are still sometimes used in these sectors: this chemical element has been completely eliminated in an industry as demanding in terms of outdoor resistance as the automotive industry, but the same has not yet been achieved in the treatment of coils for food packaging. On the other hand, as regards water treatment, chromium is one of the easiest chemical pollutants to remove from waste water, as opposed to elements that are more 'harmless' to humans and the environment such as organic substances, complexing agents, or surfactants."
Another important target sector for Simpec is the electroplating industry. "In galvanic operations, water treatment is essential. Currently, more and more companies are replacing their old water purification systems with modern ones and looking for products that are less hazardous and have a lower environmental impact," indicates Bottini.
For Simpec, exports account for around 50% of global turnover and the surface treatment sector accounts for 60-70% of them. "We worked well in 2020 and started well in 2021," states Andrea Bottini.
"I think we will see a recovery that will help us grow further. The decision to change location has also had a positive impact on our performance over the last three-four years, because it conveys a sense of prestige with customers and, above all, enables us to work adequately in proper, larger spaces."