Readies for the recovery with innovation

A new production plant with a high degree of automation, a broad range of new products and a brand new branch in the U.S. mark the latest developments of the Nexion Group

The negative state of the economy is doing nothing to slow down the plan for development of the Nexion Group. The company is boosting investment, encompassing twenty million euros for the new plant just a few kilometres from is traditional location in Corghi di Correggio, a range of new products unveiled at the trade exhibition Autopromotec, fruit of investments in research estimated at 16 million euros, and a new branch opened last May in Ohio. Points out Giulio Corghi, CEO of the Nexion Group, "The Corghi family made a decision not to entrench itself because of the downturn. The efforts made in product development are aimed at strengthening our position on the market, which now has to stand up on a global scale" Thus, the decision to invest in a new factory, added to the plants in Correggio, (Reggio Emilia), Mondolfo (Pesaro-Urbino), Sassuolo (Modena), Pieve Fosciana (Lucca) and Shanghai, China. "The new site is a sheet metal plant," continues Giulio Corghi, "where we can centralize the structural steelwork processes with economies of scale, with the company absorbing some of the processes that had been previously subcontracted out. On the one hand this means facilitating the stages of industrializing the products, gaining flexibility with respect to the product mix, reducing stocks and shortening the time-to-market, on the other automating the processes with benefits in terms of precision and repetition."

A NEW FACTORY IN PRATO DI CORREGGIO

Exiting the gates of the new production plant in Prato di Correggio on an annual basis will be 5,500 tonnes of sheet metal transformed into the metal structures of products in the catalogue, from tyre changers to aligners, brake test benches to balancers. The capacity in any case can exceed 10,000 tonnes. Built over a surface of 20,000 covered sq. m (more than three soccer fields) and expandable up to triple the amount, the new plant is technologically advanced and boasts automation exceeding 95%. "It's one of the reasons why we didn't relocate; not only the almost total absence of manual labour and the resulting use of about 50 highly specialized staff (blanking and presswork leave the way for laser and press bending), but also logistical costs and transport times, which dictate the need for nearby assembly centres for the Group". While the steel structural work, from cutting to bending to welding, accounts for 20%-25% of the product's cost, and the competitiveness today is a matter of a few tens of euros, it's clear how the investments in the production process are as much tied to the rationalization and its precise control as to the need to make the most of every potential economy. Conceived to guarantee the maximum safety and reduced environmental impact, the factory has designed the plant to optimize its usage comfort, with emphasis placed on luminosity and open spaces. The structure's external design also makes a special impact due to its imposing metal curtains which form a sort of futuristic amphitheatre that the visitor finds absolutely striking.

FULL-SCALE AUTOMATION

On the interior, bays with high ceilings cut out 20 m x 20 m areas, each nearly the expanse of a warehouse itself. Trucks unloading the sheet metal to enter production access a separate area, where a remote controlled shuttle transports the packages on the shelves of the warehouse, sorted after bar-code identification. From here, the sheets are automatically taken to the laser cutting area by a traveling lift which loads and carries them to the robot. After cutting, a separator stacks the pieces on different pallets, which are directed to the interoperational warehouse; from here they are sent to the bending machine, supplied by the robot which positions them correctly: this is where the square sections take their form, with steps that can require up to 13 bending operations. Placed on a roller conveyor, they are then transferred to the welding area, which is controlled by eight robotized stations. The process follows a "pull" type logic, i.e., based on the order of production, the operator calls the kit of the required material into an automated area which minimizes warehousing time. After being welded, the boxes are sent to a painting department, an island equipped with a temporary warehouse that gathers the lots to be painted with the same colour. After a seven-stage chemical washing operation, and the drying process, the square sections are automatically placed in a cabin where the powder coating is applied by means of a thermal procedure which guarantees precise, even coverage. The step to change the shade of paint takes just a few minutes. "The new factory," emphasizes Giulio Corghi, "substantially reduces production times and offers great flexibility, which is needed in order to respond in the immediate term to the demands of the market."

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INNOVATIONS AT THE AUTOPROMOTEC PLATFORM

"At this past Autopromotec," says Giulio Corghi, CEO of the Nexion Group, "we laid out a range of new products positioned at the top of the range. First and foremost Corghi's latest tyre changer, the Monster AG TT, version for heavy vehicles of the Master; then the Artiglio 500, flanked by the Blue Light balancer and new generation aligner Black Tech XR." Able to work on wheels with a weight of 2,500 kilos and a weight up to 1.6 m, the new Monster AG TT makes use of the "leva la leva" mechanism: "It's a totally automated machine featuring a load-bearing frame and an open base for greater freedom of movement. Anyone who's seen the tyre of a tractor being changed without the use of a lever has been absolutely stunned. At Autopromotec, we took more orders than we were ever expecting.". From one automatic tyre changer to the other, Artiglio 500 evolution from the same model 50, by expanding the range to 32" wheels and incorporating suggestions received from the field, including the bead pusher position which is more efficient and a more eclectic work positioning. "In the balancer segment," continues Giulio Corghi, "we have introduced the innovative Blue Light, which materializes a concept we developed two years ago: cameras and laser technology for detecting all the characteristic parameters of the wheel in automatic, including the wear of the tyres, and to provide tips on the coupling between the tyres and the rims. Operating with only one launch cycle, it will likely become a standard as was the case with the Artiglio." To top off, there is a touch screen monitor that the operator uses as the only interface for performing all procedures. In addition to the sophisticated Blue Light, Corghi has also introduced the electronic balancer using the microprocessor EM7270, designated for service stations and workshops. Added to the range of aligners is the new Blach Tech XR: "This is a latest generation model designed for use in smaller spaces and performance, to optimize the ergonomic features and increase versatility and precision."