

Laser cutting with automatic loading and unloading for the Italian company ESTI.

High-end 3D laser cutting stations with a fully automatic loading and unloading system have been deployed for the Italian customer ESTI Srl, part of Acciaierie Venete Group. ESTI plays a leading role in the production of wear-resistant steel spare parts.

The activities duration took 4 weeks and the restart of production occurred on the same day.

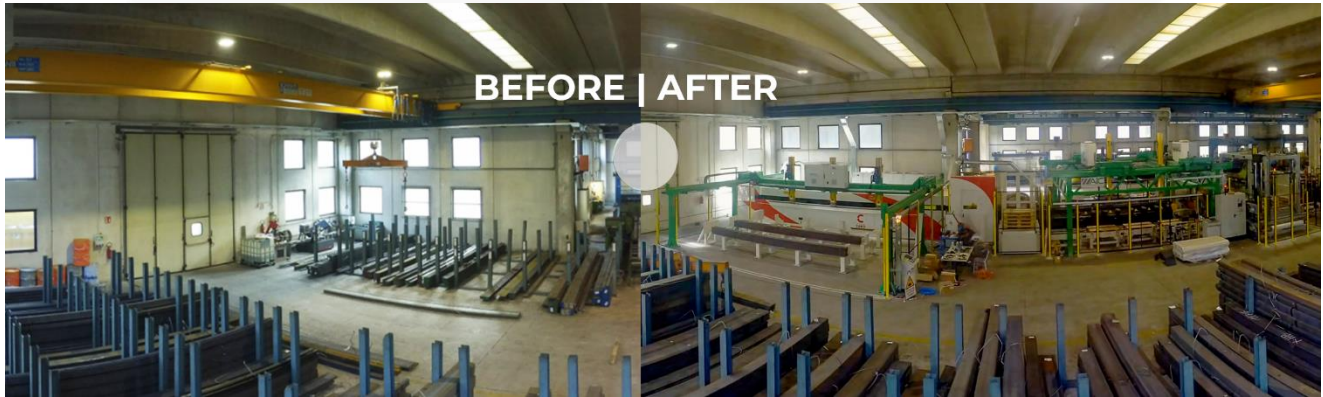


Figure 1 – An overview of the activities, as well as the situation before and after the intervention.

AIC supplied turnkey plant engineering, with the **safety** package (consisting of metal fence barriers along the entire line, and accesses), the **electrical & automation** part, and the **plant digitization**, with related Level 2 systems built from scratch (for the 'send the recipe to the machine') and the integration with the existing Level 3 (for order taking and delivery). AIC also provided all the **mechanical** parts, that means the loading pallets, the var, unloading pallets, the pallet handling, the taping machine, cartesian robots, and the **strapping machine**, developing its PLC logic.

The entire project, designed and built to fit the size of the customer's production line and workshop, has enabled full and automatic control of the material to be processed to the laser exchange table during both the loading and unloading stages.

In fact, due to the flexibility and versatility of our system, the customer could handle and cut the most varied materials positioned on the roller path, depending on the size: long bars which in turn will be strapped or materials on pallets for subsequent stacking and wrapping stages.

Stations have been fully integrated and digitized in view of Industry 4.0: it will even produce time savings in both loading time and manpower costs, combining the seriality, precision and delivery speed of the 3D laser cutting.



Figure 2 – Final layout with installation of barriers and function check.

AIC Capitanio Tailored Automation is a global system integrator that designs, manufactures and commissions turn-key plants worldwide, providing advanced and tailored automation and mechatronics solutions for the steel industry, with the aim to continuously improve both efficiencies, competitiveness and safety of the production processes. With more than 1500 applications worldwide and more than 45 years of history, AIC can boast a unique experience in both greenfield and revamping projects, especially in meltshops and long products rolling mills.

ESTI is a company based in Idro (BS, Italy), part of the Acciaierie Venete Group, playing a leading role in the production of wear-resistant steel spare parts. The company produces blades for shovel and excavator buckets, blades for dozers, graders and snowplows. The range of ESTI products is completed with the production of teeth, tips and parts in wear-resistant steel.

For more information:



Mattia Campanini
Global Marketing Coordinator
Email: mattia.campanini@aicnet.it
Tel: +39 0365 826333