Case Study

Complete digitalization of production process

Specialinsert

Goals

Precice traceability of the production process

Simplification of the work at all the levels which the company is structured

Facilitated two-way communication between machinery and project management software

Solution

Based on a system consisting of highly modular industry 4.0 software solutions that allow interconection with the company database. In addition, Part Program Manager has been implemented to facilitate the configuration of machinery recipes and streamline workflow. flusso lavorativo.

Resources

- iDaq
- Digital Factory 4.0
- PPM

The challenge

Specialinsert is a company that specializes in the design, production and commercialization of fastening systems.

In order to increase the production efficiency, the company is looking for software solutions that allow in a short time to have **smart traceability** of all the details of the production, displaying in real time statistics on the performance of machinery and production plant, and the **simplification of worflow** for the **operators** on board the **machine** with the implementation of a special **operator panel**.

Last but not least, the solution sought must be **scalable** and adapt to the architecture of data interchange already existing between the company's project management software and machinery, divided between the two sites of Turin and Mestre, making bi-directional communication 4.0 even more agile and allowing the collection of process information in a more precise and granular way.

TOOLS for SMART MINDS is required for the agile exchange part, such as collect, instant analysis of data from machinery, automatic transfer from the machine to che company management system. trasferimento automatico dal macchinario al gestionale aziendale.

![T4SM - Tools for Smart Minds logo]

Solution

T4SM met Specialinsert's needs in a short time, proposing a scalable, complete and customized solution.

In order to facilitate the entire company work, making it even more efficient, software developed with industry 4.0 in mind was installed and tested at lenght in T4SM.

iDaq automatically receives, process and sends data from the machine to the **company's project management software** in just a few seconds. With the innovative technologies presents in the platform, user constantly monitors all the operating parameters avaiable from the machine processed in real time thanks to the advanced diagnostics function, if an anomaly was found, he is prompty informed of the situation in order to intervene on the problem and solve it.

Specialinsert is an italian company that specialized in design, production and commercialization of fastening systems. Since 1974 it has been producing a wide range of products for laminates, solid bodies, plastics and composites.

The company has an internal research and development office, a technical office and a testing laboratory as well as an extensive commercial organization to support the Italian, European and world markets.

Our main objective is to sodisfy the needs of our customers, offering advanced and hight quality product and the possibility to produce special inserts.

The company system is certified, since 1997 according to UNI EN ISO 9001 at the certifying body ICIM. In March 2018, it obtained the IATF 16949:2016 certification to enter the automotive world as well.
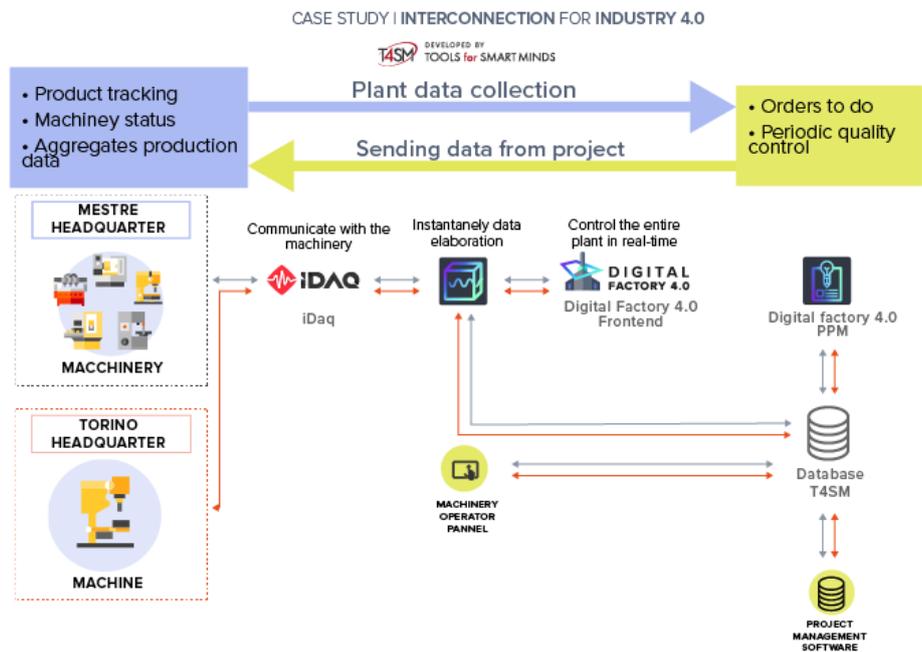
Specialinsert

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Solutions diagram for Specialinsert

Digital Factory 4.0 Frontend, combined with the data processing power of Kernel and PPMS, allows to the production supervisor the control in real time the production status of the machines, the orders in execution and the production data of the machines. The operator panel allow to visualize pending jobs and to justify throught casual stop events. In addition, it is resported when it's necessary to take pieces for a possibile quality control.

Benefits and results

All objectives have been achived, allowing Specialinsert to obtain considerable benefits, such as:

Precise and instantaneous traceability of the entire production, thanks to the facilited ttwo-way communication between mahcinery and project management system, allows immediate consultation of informations to all company personnel, generating a clear improvement in the production process at all levels. The paper tables of the orders to be produced in the production department and the related human error of compilation are immediately eliminated.

The simplification of work at all company levels due to the use of easy and intuitive solutions increases the efficiency of the SME, which adapts to the needs of the market, production and quality, thus becoming more competitive.

Future developments

The collaboration with T4SM continues with the development of a complete, fst and simple quality control system to allow the whole company to be even more efficient and eliminate any non-conformities in the articles produced.

Commento del cliente

"T4SM has been and still is, a key partner in achieving and improving the idea of "Smart Factory" that we had in mind, making it a reality.

Today, our company has begun a process of integration and constant implementation with T4SM software of our plants, allowing us to manage our production processes with data processed in real time, with the aim of achieving the Specialinsert srl 4.0, able to face the global market of the present and the future."

Dr. Franco Pioggia
Headquarter Quality Management
Specialinsert srl

TOOLS for SMART MINDS (T4SM) is a technology integrator that creates software solutions for manufacturing companies.

T4SM is an Alliance Partner of National Instruments and the development team consists of Certified LabVIEW Architects (CLAs) with extensive experience in LV-Real Time and LV-FPGA programming.

T4SM designs high-quality solutions from the ground up that are easily integrated with third-party products, helping customers shorten the time-to-market of their systems.

T4SM uses AGILE methodology for software project development and application co-design with immediate benefits for customers, helping them gain a competitive advantage over competitors.

For technical support and product information:

www.toolsforsmartminds.com

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