

CASE STUDY DISCRETE MANUFACTURING

POLTRONA FRAU

Renzo Frau founded **Poltrona Frau** in Turin in 1912. In the 1930s it had already become a status symbol. From 1926 it became the official supplier of the Italian royal family, the Savoy. Since then, it has furnished all the most famous buildings in the world. Since the 1960s, the Poltrona Frau headquarters in Tolentino - in the name of research and innovation - has brought together highly specialized departments in a single production chain, committed to guaranteeing the highest standards of quality and process in the Residential, Contract and Interiors in Motion, working 340 thousand square meters of "Pelle Frau" leather a year.

ANALYSIS

Poltrona Frau has introduced a MES system for production management in the Interiors In Motion (IIM - specialized in the outfitting of cars, trains, aircraft, yachts) division with the aim of streamlining and improving the execution of controls at the production lines by monitoring the production rate and the work cycles. The high quality level required by customers and the mainly manual processing require a high level of professionalism from the operators and at the same time their constant and immediate updating on the process and on any points of attention of it. For these reasons, Poltrona Frau wanted to place particular emphasis on the distribution in real time along the lines of the documents "Processing and Control Instructions", "Control Plans" and "One Point Lessons" in order to implement a constant "training on the job" process aligned with the real flow of production.

Poltrona Frau has adopted the concepts of "Lean manufacturing" for covering operations that require particularly important processing times, implementing real-time monitoring of the production "Takt Time" set for each model. The control of the cycle time and any production delays are highlighted directly to the operator through indicators updated in real time directly on the workstation, while at the department level dedicated "Andon" boards are displayed per center.

The project was developed starting from the "Ferrari

Cabinetry" Pilot line dedicated to the production of fittings for the Ferrari F164 model. Subsequently, the solution was extended to the entire production of the IIM division, covering further Ferrari, Land Rover, McLaren and Avio models, and also including the production of dashboards and panels containing airbags ("Bag" components).

SOLUTION

The project involved the implementation of the following sedApta application modules:

- » Shop Floor Monitor
- » Analytics.

The implemented solution has integrated in a single portal the typical functions of a MES with the needs of document distribution and production cadence control.

For all workstations it is possible to view the production documents updated directly on the basis of the part code being processed and in particular for the coating a video documenting the main steps of the production process is also displayed. These documents can be updated and distributed in real time thanks to the integration with Poltrona Frau document file system.

The control of production cadences, and in general the monitoring of cycle times, was carried out by directly integrating the hours of presence of the operators with the production activities and defining the duration of the production cadence and the production targets dynamically model by model, station per station.

At the machining center level, Poltrona Frau has mounted screens on which production "Andon" updated in real time are projected for both the Takt Time and traditional lines, where the number of target cars of the day are defined model by model.

Particular attention was given to the control of the hours worked, directly integrating the hours of presence of the operators with the activities of declaration and production progress. In fact, all operators connect to the system using the company badge during the start-up phase.



COMPANY
POLTRONA FRAU



SECTOR
DESIGN FURNITURE



SIZE
1 HEADQUARTERS AND
PRODUCTION SITE
3 DIVISIONS: RESIDENTIAL,
CONTRACT, INTERIORS IN MOTION
620 EMPLOYEES



TURNOVER
167,27 MLN € (2019)



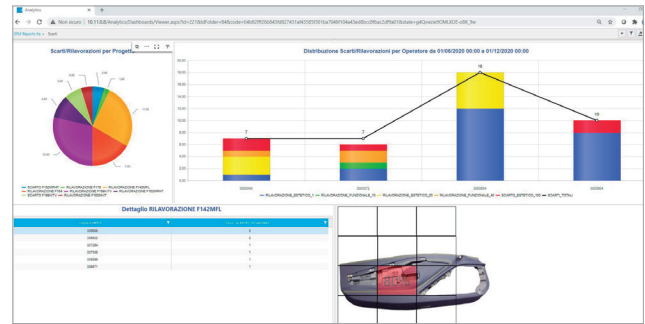
SEDAPTA MODULES
SHOP FLOOR MONITOR
OSA - ANALYTICS

Finally, to increase the efficiency of quality control in the declaration of defects and their location on the parts produced, a data entry was used based on photographs of the products being processed and on the location of the defect found, directly indicating its position on the screen. This information is then used to calculate the percentage distribution of defects area by area of each finished product. Furthermore, thanks to the complete integration between the data collected from the field and the reporting tools, the sedApta solution has implemented the various KPIs and related reports needed by Poltrona Frau for efficient production management.



“OEE” plant efficiency, “OLE” workforce efficiency, Leather Yield and Scrap Control are the main KPIs used for department management and can be viewed in detail up to the production shift.

At the “shop floor” level, Poltrona Frau has implemented tools for controlling orders in production, with indication of the quantities produced by model and processing center. Given the high quality level of the production and the materials used, particular attention was paid to quality control reports, with a focus on both the problems physically encountered on each piece produced and the actual yield per batch of the hides used.



BENEFITS

The main benefits that Poltrona Frau IIM has found are:

- » Improvement of labor efficiency and reduction of process waste
- » Standardization of the production process thanks to the possibility of showing the specific process documents for the work in progress on site
- » Reporting that allows to monitor the departments at a capillary level with detailed information not only about plants but above all about manpower
- » Identification of the main wastes within the production chain
- » More accurate and real-time monitoring of process performance
- » Reduction of Lead Time and WIP
- » Visual monitoring, thanks to the introduction of “Andon” boards, of the production progresses and of any delays / advances with respect to the target.

Poltrona Frau IIM was awarded the LEANicon2020 award from the AILM association (Italian Lean Managers Association) with the “Workplace Organization & MES project Implementation - Upholstering Department”, thanks to the sedApta solution that allowed the implementation of the new organizational processes. At European level, AILM is the largest association for those involved in continuous improvement projects.

