Tradition and future

Cantine Riunite and Movicon

The Cantine Riunite Cooperative (the most exported Italian wine brand in the world) went into operation on 10th February 1950 in the Province of Reggio Emilia with the mission to promote the excellence of Emilian agricultural productivity and transform local wine cellars and individual wine producers into an economic reality at an international level.

Cantine Riunite deployed modern and avant-garde tools to align the traditional production process techniques with the times. Their aim was to produce excellent wine that would reflect the passion and efforts made by the Reggiani winemaker members throughout the production process.

An application has been installed in the Reggiano Campegine production plant to manage services and technical rooms and monitor and control the status of the plant's three production lines. These production lines have the capacity to produce more than 300,000 bottles of wine a day.

This application was entirely developed by the Cantine Riunite technical office whose manager, Engineer Gianluca Torelli was responsible for promoting the project. "After having tried one of your competitor's SCADA products", explained Torelli, "I wanted to try Movicon out as well. I participated in one of the many webinar courses held by Progea and downloaded the Demo from your website.   I found Movicon very simple to use and intuitive.

I consequently opted to use the Italian SCADA so that I could have direct contact with the platform's producers whenever I needed to talk to them. I have to say, this turned out to be a great advantage because Progea proved to be most efficient and competent to deal with this type of application."

The system's architecture is comprised of a Movicon server, two clients and one web client. The two clients from which all the project's pages can be accessed once logging on with a password, are located in the maintenance manager's office and the production manager's office. The web client is used as a wildcard since access can be gained from any personal computer or device using a browser. The project is unique and covers the two Maintenance and Production departments where both the two clients have been installed.

Maintenance overview

The Maintenance section has been designed to constantly control and emit alarm and malfunction notifications of the companies various technical systems which include: internal and external cooling systems, Air compressors, central water supply, Heating system, Purifier, Vapor filtration and Oil Free Air systems. The cellar lights can be controlled manually or according to a predefined schedule.
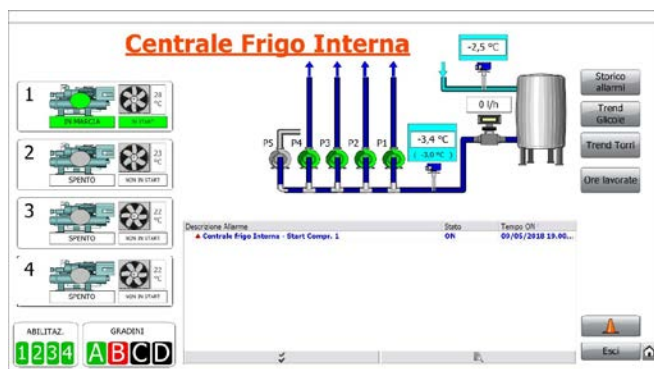

Internal Cooling system

Each page in this section contains a graphic screen page representing each system and its operating status. Another window is active at all times to show events and eventual alarms so that prompt interaction can be taken to ensure that the product quality is kept up to standard and the whole process continues smoothly in the right direction. With the aid of the Real-time Trend and Historical Trend, it is possible to analyze event behavior and any probable causes of exceeded alarm and temperature

thresholds. Some technical forms have been created to control and monitor the status of maintenance and the operating times of compressors and other devices used in various areas of the plant. By means of using these technical forms it is possible to control operating times day-by-day or by specific time ranges, view periods of inactivity, calculate averages and manage the necessary maintenance.

The supervisory pages of the various technical rooms are protected by passwords and are used to set the system's alarm intervention thresholds such as when water exceeds the set minimum or maximum water tank level for instance. When thresholds are exceeded, an alarm will show on screen and an alert will be sounded by means of an audio system installed in the maintenance office.
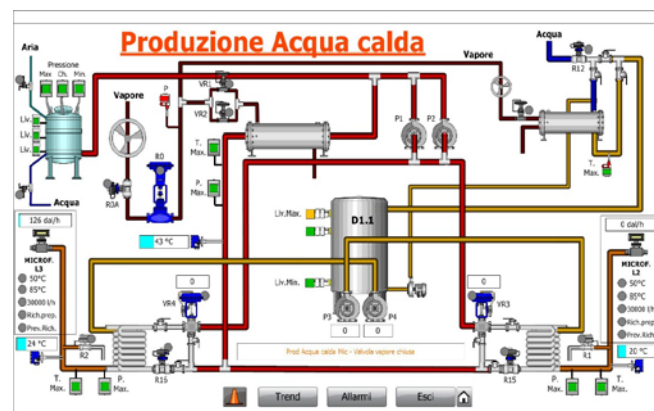
Hot water production monitoring and control

As the system to heat water is more complex than the others, an ad hoc screen page was created by means of which quick intervention can be made on the various bypasses and valves that control the vapor and circulation of the water.

The switching off and on of lights in the cellar and their brightness can be programmed using a calendar scheduler. The lights can be regulated and programmed differently for each hour of the day and controlled automatically. They can also be controlled manually by excluding the use of the scheduler.

The production supervisory system controls productivity efficiency and the state of the three bottling lines. The home page shows the general situation of the three production lines by using a pie chart to show whether they are running at full capacity, not running, or OFF. It also shows the number of bottles that have passed through from the filling machine to the labelling machine. On this page, like all the others, alarms are displayed and controlled in real-time with the possibility to access the various pages dedicated to each of the technical rooms.

Selecting one of the three production lines, will get you instant access to another page showing all the production line's values that reveal how efficiently the machine has been operating.

Production line 3 productivity calculation

The same production line is also displayed using simple and effective graphics that allow operators to keep track on how each machine in the production is running. The machines used in the production line are: Depalletizer – Filling machine – Pasteurizer – Labelling machine – Packaging machine – Palletizer each one equipped to provide data of its own productivity.

This page is also used to consult real-time and historical production charts, set specific parameters such as the conveyor belt speed, consult various piece counts and manage alarms if they occur. A detailed page has been created for each machine so that if you access the filling machine page, for example, you will be able to see how many bottles have been filled, broken or rejected in a certain period of time or batch selectable with the aid of using filters.

The page dedicated to the Pasteurizer machine is used to change the process variables that control the temperatures and processing times. A window with a real-time trend showing these values remains active at all times. All can be controlled from the two offices in which the Movicon Clients are installed: parameters, temperatures, margin of error, alarms and anomalies, production and productivity. This type of overall supervision is a highly reliable way to obtain productivity efficiency in the Cantine Riunite di Campegine plant that would otherwise be impossible to achieve with a normal control system.

"Thanks to the Progea Platform's integrated functions" says Torelli, "I have been able to achieve all that I planned to do at the beginning and something more. Functions like the Trends, Charts and Schedulers significantly speeded up my work. The scripts that I had to insert in the application without any difficulty, allowed me to further customize the various project pages as required."

Torelli took less than one year to develop and get this great project up and running without having to neglect his other duties which go beyond those of design engineering supervision systems. The final results were those desired and met the demands put forward by the company. These demands included non-stop control of maintenance, alarms and anomaly in such a way to allow prompt intervention when needed. Plus production quality control in real-time with historical data consultation to allow prompt intervention to manage machine parameters accurately and traceability of the person responsible. In addition, Production Managers can now analyze all data and compare them with previously collected production data to detect those areas of the production line that need improving and make the right decisions and act appropriately to remedy them.
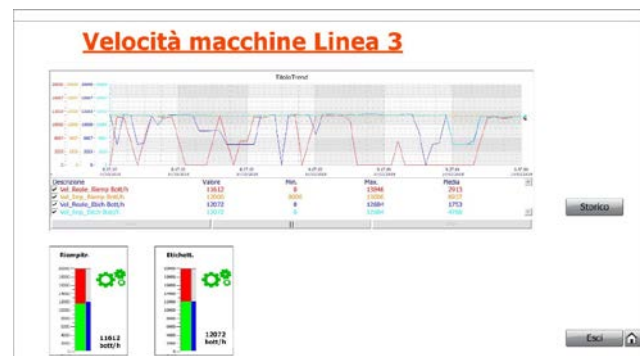
Screenshot showing machine speed in production line 3

Further plans to expand are in the pipeline to insert new areas and new controls in the project with the same intention to have everything under total control. Due to Movicon's scalability, this will not be a problem.

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