



STAND-ALONE MONITORING, AUTOMATION AND REMOTE CONTROL SYSTEM FOR MANAGING HYDRAULIC COMPONENTS

Consortium monitoring, automation and remote control system equipped with WinNET7 management and display system complete with integrated alarm system and specialised software packages

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Consorzio di bonifica
Territori del Mincio

CHALLENGE

Execution of a stand-alone monitoring, remote control and automation system able to automatically manage and monitor hydraulic components. The system has continuous flow rate monitoring stations, as required by the specific regional directive.

WHY ETG?

The wealth of experience that ETG has acquired in the weather instrumentation sector and in real-time monitoring data acquisition, archiving, processing and circulation makes it a valuable collaborator.

INTRODUCTION

The monitoring, automation and remote control system in question consists of over **60 stations** communicating by **XG cellular modem**.

The monitoring stations communicate through the cellular network with a control centre on which the ETG platform - called **WinNET7** - was installed and in addition to the basic functions guaranteed by the CORE package, it is equipped with specialised packages, including: Video Package, Alarm Package, Hydraulic Package, Consumption Monitoring Package (electricity and water) and Water Package.

The system is totally integrated and can be used from any mobile or landline device connected to the Internet. Furthermore, **special alarms agreed upon with the customer** were configured on these devices. They are necessary for notifying malfunctions to the monitored system or significantly important situations, such as the passing of an alarm threshold linked, for example, to a hydrometric level, pipe pressure, etc. The system also has stations for monitoring flow rates: through our specialised technicians, the hydrometric stations we supplied have flow scales so that they can supply the **flow rate data in real time** directly in output.

SOLUTION

The system, made up of the elements described above, is able to monitor weather and hydrologic parameters and to control the system and its hydraulic and mechanical components remotely.

BENEFITS

The remote control system built by ETG has allowed the Consortium to enjoy many benefits. In systems like manual ones, all the activities in the field were performed by the Consortium technicians, who at any time of day or night manually carried out any activity, whether checking hydraulic and mechanical components or monitoring and alert components, when responding to reports or checking directly in the field. Activities like hydraulic adjustment, reclamation and irrigation demand a very high number of operations. By using an automation and remote system like the one ETG has introduced, these operations have exponentially reduced the costs due to movements and speed of operation in the field.

The system built this way was totally integrated in the platform designed by ETG, which goes by the trade name

WinNET7.

This application guaranteed that the Consortium would have complete knowledge of the network's state, thus allowing it to totally monitor it also using graphic supports and a customised alarm service used by the personnel on call.

In some cases, the Consortium used high resolution cameras to monitor the system for the safety and control of the systems installed.

The newly supplied software was also complete with the specific specialised package for **monitoring consumption**, acquiring parameters, for example, of **electricity consumption** of the hydraulic components and analysis aimed at reducing waste of the electrical resource; totally similar principles were also carried forward to reduce **water consumption** as well.

CONCLUSION

Every new monitoring, automation and remote control system engineered by ETG entails peculiarities that can be solved only by those - like our company - that is an expert in this particular sector.

In the case of the system built for Consorzio di Bonifica dei Territori del Mincio, the major challenge ETG had to face was to take such a complex system made up of such different elements and situations and integrate it in a software platform that would provide complete monitoring and totally manage its functions.

All of this is to get a system that would allow not only the remote control of hydraulic components and the monitoring of hydrologic weather parameters, but also to perform video and electricity and water consumption monitoring.

ETG is particularly proud of these latter two factors since we have been working for year on **reducing the consumption of increasingly limited resources, thus those to be safeguarded.**

In this way, the system became simple and easy to manage, even with mobile devices like mobile phones and tables, providing the consortium with an easy to use and at the same time portable tool.

