



Efficient Energy Innovation in Wellness center

Implementing Movicon Scada platform in systems supplied by Rebernig Supervisioni Srl improves wellness center's environmental conditions, optimizes energy management and reduces energy consumptions.

The “The Meadow of the Angels” pool and Spa Relax center is a modern structure located in a natural environment amongst the foothills of Bologna that offers its clients to chill out in a peaceful and relaxing atmosphere within an ‘agritourism’ context. This center has been nature-friendly designed with innovative criteria focusing on environment protection, energy saving and the most advanced building automation technologies. The wellness center is submerged in a natural beauty spot called Sasso Nero located in the borough of

Monterenzio in the Bolognese hills. The control system was engineered by Rebernig Supervisioni Srl, on behalf of clients Tagliavini Srl, who requested the best technology available. The project is comprised of a control and supervision system distributed on a 2km optic fiber ring that collects process data deriving from heterogeneous systems such as distributed I/O devices, photovoltaic systems, central heating, wellness center relaxation and spa with heated pool management.

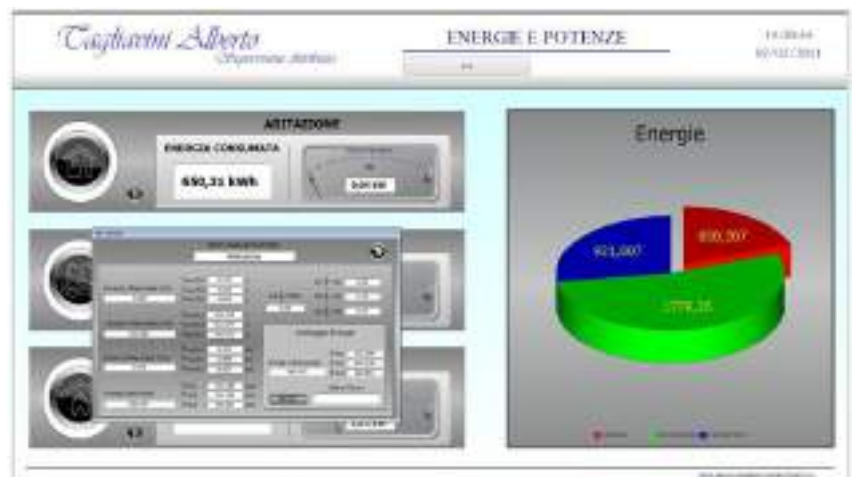
The structure is situated on national park grounds with a main building accommodating the wellness center and spa, separate central heating and two 15 and 12 kWp photovoltaic systems installed on top of the warehouse roof, reception and head office building which also has a shop selling organic food produce cultivated by the adjacent farm associates. The two photovoltaic systems have been structured to produce 15 kWp (with SMA technology) and 12 kWp (with POWER ONE technology). The control system comes installed with 4 intelligent industrial routers, interconnected through a 2km optic fiber ring, to which several I/O slave devices and control units are connected and whose information flows into the supervision system composed of a Touch Screen PC based on the Movicon 11 Scada/HMI platform. The industrial routers are configured for collecting data from fields relating to various process parameters by implementing protocol conversions (i.e. propriety protocols, such as solar inverters or heated pool control devices with TCP/IP Modbus protocols).

The supervision project based on Movicon has the important task of supervising the different substations by providing the operator with intuitive graphical interfaces to ensure user friendliness and total system monitoring control, with the possibility to intervene and optimize conditions of the various systems and/or promptly manage critical situations. The most significant process data is managed in real-time using intuitive and easy-to-use on screen graphics and stored in the relational database to allow historical and statistical analysis.

Thanks to this kind of architecture, it has become possible to develop in one unique



supervision system capable of synthesizing, without errors, data deriving from heterogeneous systems, though complex and distributed provides an important advantage that is does not require specialized personnel to run due to its simplicity-of-use. Movicon's enhanced HMI interface developer features permits captivating graphical implementation without neglecting the pure engineering aspects. Therefore parameters are regularly monitored that include pool



water temperatures, chlorine concentrations, PH and acidity as well as the working status and running of the heated pool facilities, such as temperatures, central heating (boiler, water pumps and radiators), all process data deriving from the photovoltaic systems with regular energy consumption analysis of the whole structure, all of which is performed through the touch screen interface.

Supervision of this type provides supplies information both to personnel, who are instantly informed of eventual malfunctioning by receiving alerts from the system and the system manager and analyst, who can perform analysis using the various advanced detailed graphics to view historical data and easy-to-implement trends thanks to the Movicon software.

Heterogeneous data converge in one single control system, allowing management efficiency improvement of the whole complex thanks to easier running, supervision and analysis, which were essential needs requested by the client.

The Reberning Supervisioni Srl has achieved their target in full completely satisfying their client's needs in managing and maintaining the whole system,



accessing the supervisor at all times through the web for data on operating and consumption statuses and resulted savings.

Reberning Supervisioni S.r.l.
<http://www.reberning.it>

The builders, Tagliavini Srl, are a company who deal with building projects which involve building construction with high performing features and innovative solutions aimed at enhancing wellness center environments and reducing consumptions while improving energy efficiency.



This company has a long experience in the construction industry, an experience which has transformed into realization of projects assigned to a highly competent team qualified to satisfy all customer needs by proposing reliable and efficient solutions.

Pleasant livable environments, light space, doors and windows alternate within any project realization, creating the perfect balance and high performance building constructions projected with great precision. The engineering staff strictly designs projects that comply with the normatives in act, both in terms of security and building construction. The mission to express client needs in the best way possible is paramount to a building company such as Tagliavini s.r.l., the driving force behind every action, every project created and every service proposed.