

Emerson SCADA software helps ABHA sports arena achieve precise building management

RESULTS

- Stable, precise and immediate control of environmental conditions
- Improved building management
- Immediate reporting of water leaks
- Fast reports, trends and data analysis
- Virtually unlimited project customizations



APPLICATION

Building management supervisory control system for indoor sports arena.

CUSTOMER

Ali Bin Hamad Al Attiyah (ABHA) sports arena in Doha, Qatar.

CHALLENGE

The ABHA Arena is a 7,700-seat venue that hosts major boxing, gymnastics, badminton, volleyball, handball, table tennis and ice hockey events. The facility required an easy-to-use precision supervisory control system as part of its building management system (BMS).

The supervisory control system is required to manage and visualize data coming from disparate sub-systems such as fire alarm and intrusion detection systems, mechanical, electrical, audiovisual and plumbing systems. It also controls the process of transforming the main hall into an ice hockey rink.

SOLUTION

Local systems integrator Lysys Qatar WLL selected Emerson's Movicon™ as the SCADA platform for the supervisory control level of the BMS. The entire BMS is supported by two redundant rack servers, with Movicon installed and the entire automation system is managed by 29 BMS panels. These panels communicate with Movicon using OPC UA to obtain the sub-systems' variables. At the supervisory level, Movicon handles almost 45,000 variables from devices installed in the arena.

"We chose Movicon due to the stringent requirements of the client. We knew Movicon's potential and thought it was the ideal solution for a building management system as complex as that of the ABHA Arena."

Jose Fernando Pereira
Project Manager And Automation Team Leader
Lysys Qatar WLL

All building sub-systems, including fire alarm and intrusion detection, mechanical, electrical, audiovisual, and plumbing, are visualized centrally. Movicon not only manages and visualizes data coming from the building's sub-systems, it also collects data from external sources such as weather stations. Using Movicon, operators can easily and efficiently transform the hall into an ice hockey rink.

Movicon also manages the electrical system to efficiently monitor and control building power. Using Modbus, Movicon communicates to basic electrical devices and smart devices. The plumbing system is also monitored with Movicon and water leaks can be quickly reported. Operators can quickly repair leaks because Movicon enables remote notifications and alarms.

An SQL database is used to historicize all the parameters collected and all the alarms generated in the system. In the control room, the operators can interact with processes and change the datapoints or operational settings, so that they can maintain precise environmental control.

RESOURCES

Emerson industrial Automation and Controls

<https://www.emerson.com/en-us/automation/control-and-safety-systems/industrial-automation-controls-iac>

Programmable Automation Controllers

<https://www.emerson.com/en-us/automation/control-and-safety-systems/programmable-automation-control-systems/programmable-automation-controllers>

Control Software

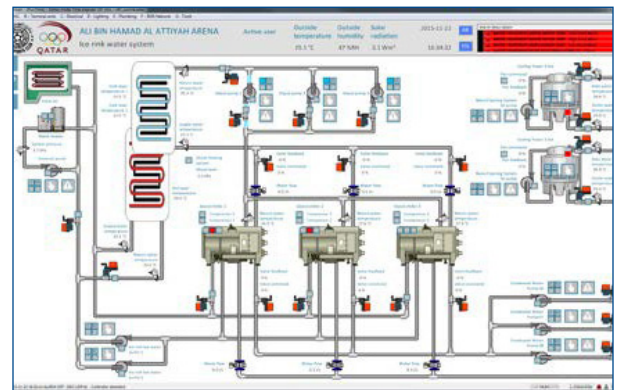
<https://www.emerson.com/en-us/automation/control-and-safety-systems/programmable-automation-control-systems/control-software>

Movicon

<https://www.progea.com/>



Movicon supervises the process of transforming the arena's main hall into an ice hockey rink.



Using Movicon, operators control the ice rink water system, taking data collected from an external weather station.

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