The MSC Meraviglia

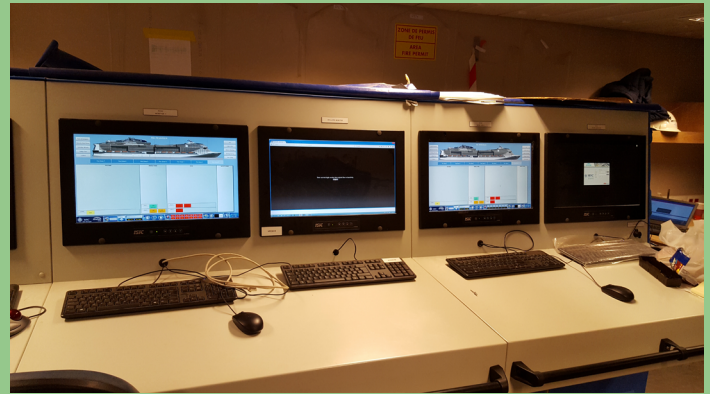## MSC Cruises
Saint-Nazaire, France

A Single Deck's Fire Zones Interface

Monitoring Station aboard the MSC Meraviglia

About MSC Cruises

MSC Cruises (www.msccruises.com), headquartered in Geneva, Switzerland with a shipyard in Saint-Nazaire, France, is the world's fourth largest cruise line and largest privately-owned cruise company, and market leader in the Mediterranean, South America and South Africa. Following several years of unprecedented growth, MSC Cruises sails throughout the year in the Mediterranean, and offers a wide range of seasonal itineraries in Northern Europe, the Atlantic Ocean, the Caribbean, Cuba and French Antilles, South America, South Africa, Abu Dhabi, Dubai and Oman.

The company grew by 800% between 2004 and 2014, carrying 1.67 million guests in 2014 and reported strong financial results with a turnover of €1.5 billion. MSC Cruises is a Swiss-based European company with deep Mediterranean roots employing 15,000 staff around the world and present in 45 countries.

ICONICS Software Deployed

MSC Cruises, working with system integrator, Engie Axima (www.engie-axima.fr) selected ICONICS' GEN-ESIS64™ HMI/SCADA and building automation suite.

Project Summary

MSC Cruises sought a modern monitoring and control system for its latest cruise ship, the MSC Meraviglia. According to a company release, at 171,598 gross register tonnage (GRT) and with guest capacity of 5,714, MSC Meraviglia is both the biggest ship to ever be built by a European ship owner (MSC Cruises) and the biggest

to come into service in 2017. The cruise ship, the 13th to join MSC Cruises' fleet since the company's inception in 2003, is 315 meters long, 43 meters wide and 65 meters high and can travel up to 22.7 knots. Among the ship's attractions are a water park with multiple water slides, a Himalayan rope course, a Cirque du Soleil theatre, and the largest LED dome at sea.
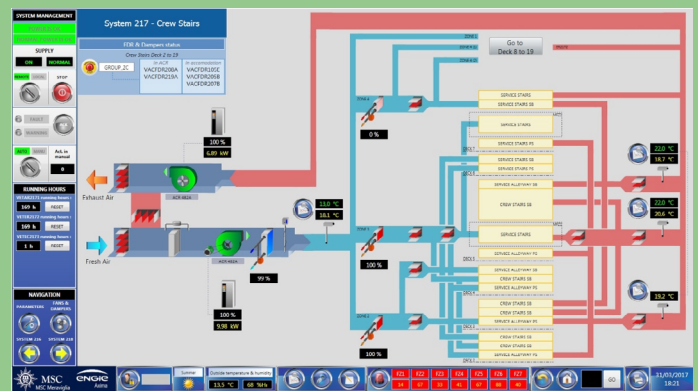
MSC Cruises hold the comfort and safety of its passengers as a top priority, which includes the monitoring and management of its ship wide HVAC system.

Benefits of the System

MSC Cruises wanted to include the latest technology in its newest cruise ship, not only for the entertainment of its passengers but also for their, and its crew's, personal comfort. Ship wide, the operation of its HVAC system can be easily performed via Web-connected touchpads thanks to the installation of ICONICS GENESIS64 HMI/SCADA software. A detailed, intuitive, easy-to-use interface allows operators to monitor and set temperatures and related parameters throughout the ship.

An MSC Meraviglia HVAC System

Crew Stairs Air Control Management Screen

With assistance from Engie Axima, the cruise company selected a system for the Meraviglia that would cover the heating, ventilation and air conditioning throughout passenger cabin, public space, galley, stairway, technical room, swimming pool, and wheelhouse areas. Combined, approximately 450 fans, 820 sensors and 1,000 actuators are now controlled and monitored via ICONICS GENESIS64 software. Approximately 6,000 physical input/output (I/O) points and 15,000 communications I/O points are connected through the system, including interfaces with over 100 SAIA Burgess PLCs. In addition, GENESIS64 also connects to Kepware OPC Server software aboard the vessel.

Conclusion

The MSC Meraviglia was put into service in June 2017. The ship's owners and operators are now confident that, with ICONICS GENESIS64 onboard, the furthest thing from their passengers' minds will be any concerns over heating or cooling.

ICO-CSS-092