Dalmacijacement d.d.
Kaštel Sućurac, Croatia

Dalmacijacement d.d. Cement Production Plant
Sveti Juraj, Croatia
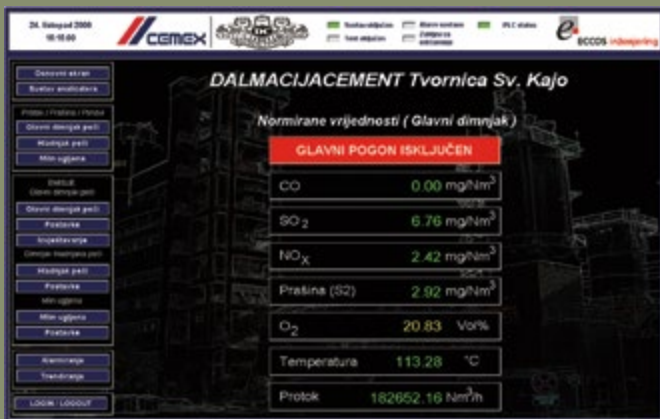
Startup Screen at Sveti Kajo, Croatia

About Dalmacijacement d.d.

Dalmacijacement d.d., of Kaštel Sućurac, Croatia is part of the CEMEX consortium (www.cemex.com), one of the top building materials companies in the world. The company is the Croatian market leader in cement production, with three factories (plants): Sveti Juraj (Saint Juraj), Sveti Kajo (Saint Kajo) and 10. Kolovoz.

ICONICS Software Deployed

Dalmacijacement d.d., working with systems integrator, ECCOS inženjering, selected ICONICS' GENESIS32™ Web-enabled, OPC-integrated HMI/SCADA Suite (including GraphWorX™32, AlarmWorX™32 and TrendWorX™32 components), as well as the BizViz™ Manufacturing Intelligence/Business Visualization Suite (including the ReportWorX™ enterprise reporting/charting/analysis component).

Project Summary

The Republic of Croatia, in cooperation with The European Union, introduced legislation for environmental protection through continuous emissions monitoring. Dalmacijacement d.d. set out, with assistance from ECCOS inženjering, to bring all of its factories under compliance, with the goal of creating a continuous emissions monitoring system (CEMS). Manufacturing facilities are often assumed to be sources of pollution, so a system was required that could continuously monitor emissions, graphically depict these emissions, normalize the measurements, archive measured and calculated (i.e. normalized) values, inform the public through corporate Web pages and, most importantly, create daily, monthly and yearly reports in Microsoft Excel and XML-formats that adhere to the legislative requirements.

The newly created system collects raw (i.e. measured) values and recalculates them to create normalized data based on the normalization factors. Both raw and normalized values are presented to the operator through ICONICS GraphWorX in real time. If any of the measured values exceed the defined upper limits, an alarm is triggered via AlarmWorX, informing the operator to change the process in question. Any other malfunctions or errors in the equipment also trigger alarms, which are depicted in GraphWorX and stored to a database via AlarmWorX logger.

Data is stored to a SQL database through ICONICS' TrendWorX. Since the project has to satisfy people in different positions with different interests, data is stored in three logging groups; 1 minute; 10 minute; and 30 minute average values. The first two groups are impor-

tant to the operators at the factory (real time) and to the public through corporate Web pages (slight delay). The third group (30 minute average values) is needed to create reports for the Croatian environmental agency.

Reports are created through ICONICS' ReportWorX, a component of the BizViz suite. Considerable SQL programming (Stored procedures, Dynamic SQL) had to be done due to the fact that the measured values had to be positioned on exact positions in Excel sheets (48 half-hour values per day - if one is missing or corrupt, the Excel cell has to be empty) as well as verified (Kiln On/Off, Main generator On/Off, Transition period or normal operation mode).

ICONICS solutions also integrate with Dalmacijacement d.d.'s Microsoft software, including Windows Server 2003 R2, Office 2007 (especially Excel) and SQL 2005 Express Edition SP2.

Conclusion

Dalmacijacement d.d. is pleased with their new driven emissions monitoring system and plans to use ICONICS for further development, addressing additional pollution factors throughout its sites, while ECCOS inženjering plans to use a similar system for other clients requiring the same level of emissions monitoring, including other factories, electric plants, waste processing facilities and more.
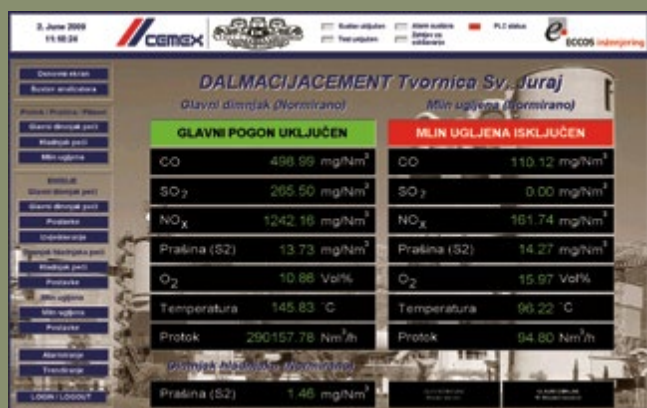
A Main Control Screen for Dalmacijacement d.d.'s Sveti Juraj, Croatia Plant
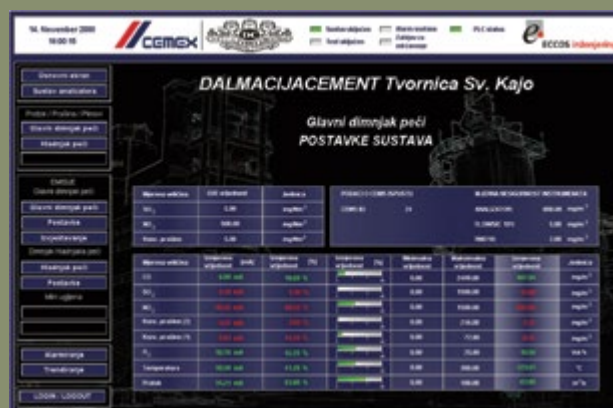
A Calculation Screen at Dalmacijacement d.d.'s Sveti Kajo, Croatia Plant

Benefits of the System

Dalmacijacement d.d. selected ICONICS for its emissions monitoring system upon ECCOS inženjering's recommendation. The ICONICS solution helped meet the building materials company's requirements for cost-effective data visualization, control, alarming, trending and reporting. The system integrates with the company's Siemens S7/300 modular controllers, SIMATIC ET200 I/O systems, Profibus communications and a number of specialized sensors including AirLoq gas analyzers, Flowsic 102 flow monitors, RM210/FW101 dust monitors and Itabar particle analyzers.

Solutions Highlighted

GraphWorX
HMI Graphical Display Package

AlarmWorX
Multimedia OPC Alarm Management Software

TrendWorX
Data Logging Charting and Reporting Software

BizViz
Manufacturing Intelligence/Business Visualization Suite

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