

Safe and Fast Replacement of Plant Information Management System

Techno Tsuruga Co. Ltd

Location: Tsuruga, Fukui, Japan
Order date: June 2005
Completion: January 2006
Industry: Cement

About the Customer

Founded in 1996, Techno Tsuruga Co. Ltd. is an engineering and construction company in the Tsuruga Cement Group. Techno Tsuruga is engaged in electrical, machinery, construction, and civil engineering projects. The company provides design, construction, installation, and services for plants and environmentally friendly facilities based on the transportation, milling, mixing, burning, and dust collection technologies it has acquired through cement manufacturing. The company also has a track record in storage facilities and transportation equipment.

Tsuruga Cement Co. Ltd., Techno Tsuruga's parent company, produces high-quality cement using the most advanced manufacturing facilities and technologies. The product is shipped under the Taiheiyo Cement trade name to the nearby Hokuriku region as well as the Kinki region. Tsuruga Cement produces 140,000 tons of cement, 13,000 tons of calcium carbonate, and 11,000 tons of silica powder per month.

Techno Tsuruga was contracted by Tsuruga Cement to replace the legacy plant information management system at the company's cement plant with a new one. The project scope included installation, application development, and maintenance.

The Challenges

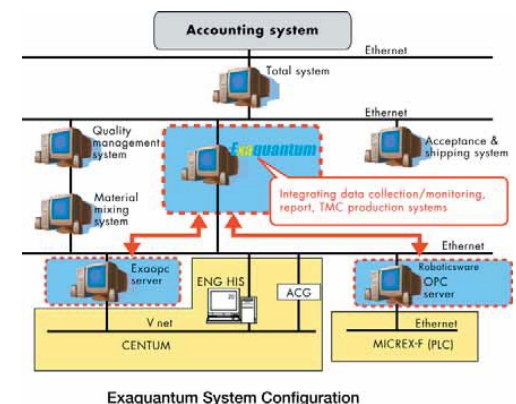
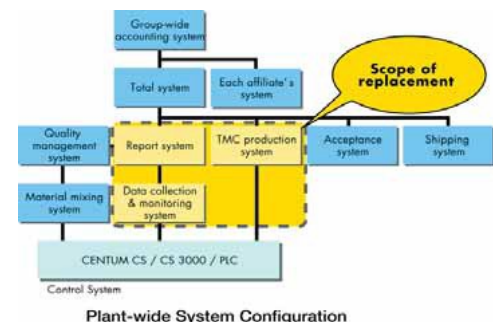
In addition to obsolete hardware and software, the existing system had the following problems:

- Hardware end of support (EOS)
- Complicated configuration and unstable behavior
- Inflexibility of data usage
- Degraded maintainability and expandability
- Limited communication with subsystems
- Master clock delay

Why Exaquantum?

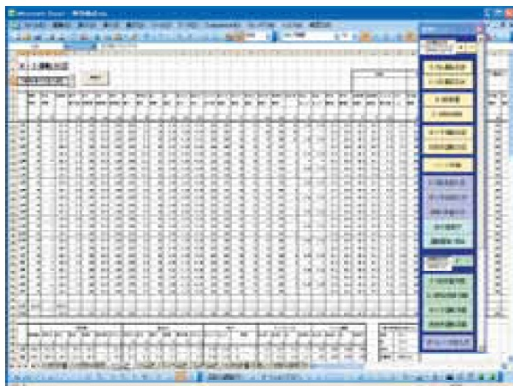
Techno Tsuruga adopted the Exaquantum system for the following reasons:

- State-of-the-art and stable platform
- Simple system configuration
- Seamless data collection, monitoring, and aggregation
- Integrated system network using Ethernet
- Improved maintainability in Microsoft-based software environment
- Compatibility of tag information with CENTUM
- Easy connection using OPC interfaces
- Auto synchronization with master clock

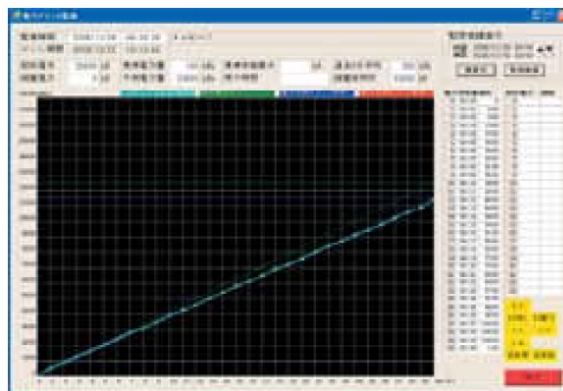


The Exaquantum Solutions and Results

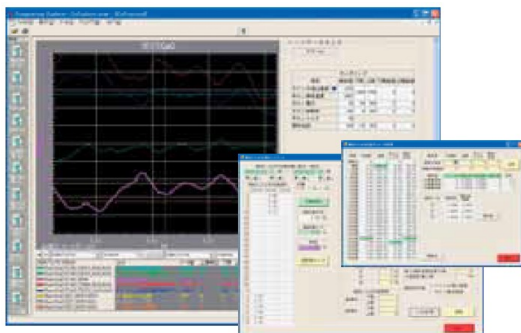
An overview screen and other operation monitoring screens were developed to provide an overview of plant-wide operation status and performance. Detailed screens are available from the main menu for confirming the operation of manufacturing equipment and the inventory status at a glance. Report and other function screens were also incorporated.



- **Easy-to-use report system**
Features flexible screen layout and expandability through Excel and application programming interfaces (API)



- **Electric power demand monitoring screen with enhanced real-time capability**
Features easy-to-grasp layout through Visual Basic (VB) and API



- **Monitoring screens for estimated free calcium oxide content**
Features excellent visibility and operability through Explorer, VB, and API to better maintain control parameters
- **Automatic production control ranging from schedule to instructions, current status display, actual data collection, and report output.**

Project Period

Techno Tsuruga installed Exaquantum in August 2005, and developed applications including 30 screens and 70 report forms in only six months. The replacement was safely completed while the system kept operating. The switchover to the new system went off without a hitch in January 2006.

Yokogawa Electric Corporation

YOKOGAWA ELECTRIC CORPORATION
World Headquarters
9-32 Nakagyo 2-chome, Musashino-shi, Tokyo 180-8750, Japan
<http://www.yokogawa.com/>

Subject to change without notice
All Rights Reserved, Copyright © 2022, by Yokogawa Electric Corporation