Real-time monitoring and control: Siemens supplies management system for liquid bulk storage and distribution terminal on Taman Peninsula in Russia

Siemens Belgium is installing an integrated Manufacturing Execution System (MES) at a new tank farm on the Taman Peninsula, in Russia's Krasnodar region. The order was awarded by the United Transport and Forwarding Company OTEKO, which intends to use the system to manage operating schedules in the tank terminal. All data collected from the MES can be called up in real time, which results in optimized operational control. Specific components like order and access management or stock accounting cover typical terminal management needs. Delivery of the MES is scheduled for commissioning during the second half of 2011.

Siemens Russia is currently commissioning the electrical and automation equipment of the liquefied petroleum gas (LPG), crude oil and fuel oil terminal on the Taman peninsula. To further maximize the performance of the terminal complex, the transportation company OTEKO has also awarded a contract for the installation of Sitas IT, the Siemens Terminal Automation System. This industry specific IT package is based on Simatic IT, the MES from Siemens. It will be supplied by Siemens S.A. Belgium, the competence center for tank terminals within the Industry Solutions Division.

Sitas IT organizes and manages all operational sequences. In addition, all tank terminal processes and IT components are collected, coordinated and presented graphically. The result is a transparent and dynamic view of the plant's operation. Several components like order execution, stock management, access management and other operational components help manage specific manufacturing tasks. As an example, the order execution component transforms planned tasks into operational orders, which greatly optimizes the entire process. The stock management component takes care of accounting and inventory of stock; this feature ensures higher overall equipment effectiveness as a result of increased throughput and reduced turnaround time. The access management component provides the means to handle on-site logistics where needed. Operational components such as reception, storage, handling and delivery support loading and
unloading operations. All data for any production step that has been collected by Sitas IT are available in real time, and can be aggregated for key performance indicators (KPIs). This information can be used to make detailed performance analyses of individual parts of the tank terminal and to analyze downtimes.

Additional IT components as well as third-party packages can be directly plugged into the MES framework, where they are managed in a consistent way. This allows OTEKO to quickly implement existing applications. In addition, easily configurable interfaces secure the integration to the other IT levels.

The transportation company OTEKO manages the rail tank car fleets of the privately owned Russian rail transport companies JSC SFAT and JSC Russkiy Mir. To provide southern export facilities for LPG, OTEKO has built a large transshipment terminal complex for liquefied hydrocarbons on the Black Sea coast. Around 9.5 million tons annually of crude and fuel oil, and 1 million tons of LPG, arriving by rail at the terminal will be reloaded onto vessels for export.

Further information on solutions for liquid bulk terminals, distribution terminals and airport fueling systems is available at: http://www.siemens.com/tankterminals


For the new Taman Tank Terminal in Russia Siemens will supply an integrated Manufacturing Execution System. (Photo: OTEKO)
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