Success story

Migrating a Dutch waste-to-energy plant towards a future of stable control

An ABB control system migration at a waste-to-energy plant in the Netherlands will ensure state-of-the-art plant control for at least another 10 – 15 years. HVC Group is a modern public waste services company located in the city of Alkmaar north of Amsterdam, where it operates the HVC Alkmaar plant. Alkmaar comprises four incineration lines that process about 660,000 metric tons of domestic and industrial waste from more than one million residents, mainly in northern Netherlands.

From this waste stream, the plant's two steam turbines (50 MW per machine) produce electrical energy for more than 100,000 people and hot water for a district heating network in an industrial park and residential districts in the neighborhood.

ABB is migrating the existing components of the plant's outdated Contronic E control system, as well as the turbine control system, into its Symphony Plus/Melody system. After retrofitting the three combustion lines with Symphony Plus/Melody, ABB will upgrade the automation system of the remaining electrical and thermal facilities. The migration requires the shut-down of the entire plant, so the installation and commissioning will take place during only one week plant overhaul scheduled at the beginning of 2016.

During this extremely challenging implementation time, the input and output components as well as the processing units for more than 1,400 measurements, contacts and drives will be replaced.

Precise detail engineering and extensive testing (FAT) in the Minden test field will ensure ABB successfully meets the ambitious time schedule.

HVC Group decided to install Symphony Plus/Melody to build the foundation of a consistent process control concept for HVC Alkmaar's combustion lines, turbines and auxiliary equipment. The entire automation system can be handled from one control room, using one common operating system. The highly efficient engineering tool, Symphony Plus/Composer, will be used for system-wide configuration and maintenance tasks.

As well, one of the two steam turbines will be modernized with an ABB Turbotrol 10 control system, which can be incorporated into the Melody concept. Generator voltage will be controlled with a Unitrol installation.

In addition to the engineering the automation functions and planning the installation, ABB will execute all site work, such as cabling, functional checks, commissioning and optimization services.

Project name	HVC Alkmaar WtE plant
Location	City of Alkmaar, Netherlands
Customer	HVC Group
Completion	2016

ABB solution

- Migration of the the plant's outdated Contronic E control system, as well as the plant's turbine control system, into the state-of-the-art Symphony Plus/ Melody system.
- The I/Os and the processing units for more than 1,400 measurements, contacts and drives will be replaced in a short period of time.

System benefits

- The entire automation system can be handled from one control room, using one system-wide operating system.
- The upgrade ensures state-of-the-art plant control for at least another 10 – 15 years.

For more information, please contact:

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