Industry: Environmental Management
Products: Compact PLCs · HMI Units

Control Architecture for Dioxin Monitoring System

Measuring emissions of extremely small quantities of critical pollutants used to be a complex and time-consuming process – especially in applications like industrial waste incineration, cement manufacturing, metallurgical processes and the petrochemicals industry. Monitoring Systems GmbH in the Austrian town of Kottingbrunn has developed an efficient monitoring system that makes it much easier to determine pollution levels for all the 210 substances in the dioxin and furan family. The system is based on controller technology from Mitsubishi Electric and is marketed worldwide.

The Dioxin Monitoring System has three main components, all of which are customisable for the needs of individual applications: the filters, the sampling unit and the controller unit. Its modular design and controller architecture emphasises simplicity. When the automatic sampling process is complete the operator simply replaces a filter cartridge and sends the cartridge with the cumulated pollutant sample to the laboratory, where analysis can be performed much more efficiently than on site.

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> **"Mitsubishi's intelligent components give us remote access to all functions for round-the-clock maintenance from any location."**
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> Thomas Steiner, CEO
> Monitoring Systems GmbH
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The system's controller unit is built around Mitsubishi Electric components, including the FX2N compact PLC in combination with the MAC E700 human-machine interface (HMI) unit with a high-resolution display and 16 function keys. Other components include the FX2N-4AD-PT temperature data input module with four channels for PT100 sensors and an FX2N-2DA output module with two analog outputs. Remote access is supported for all functions. This and the integrated design of the Dioxin Monitoring System make it much less expensive to operate than mobile measurement stations requiring time-consuming installation and de-installation, and it also makes laboratory analyses simpler.

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