

Solution Spotlight: Mobile ESP Test Unit Reduces Plant Downtime

Written by MT Staff
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It offers electrostatic precipitator (ESP) operators a convenient option for on-site testing and optimization of collecting efficiency.

Electrostatic precipitators (ESP) filter exhaust gases emitted from industrial, utility power and refuse incineration plants, and collect and remove pollutants such as dust, soot and aerosols. Changes in operational conditions or new emissions regulations can require an increase in ESP collecting efficiency. To comply, plant operators can either mechanically expand the precipitator itself or increase performance by installing new control equipment. The process, however, can be more efficient.



Siemens Industry, Inc., has introduced a mobile test unit for electrostatic precipitators to the U.S. market. Now, plant operators can gather information about the status of an ESP and its optimization potential by installing a temporary controls upgrade. The new container-based system helps maximize uptime and reduce testing costs by giving plant operators information about the status of a connected ESP—*while also providing data for performance improvement and energy savings.*

Easy transport and quick

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installation eliminate the need for complete precipitator shutdown.

On the outside, this testing unit looks like a standard 20-ft.-long shipping container. Looking inside, though, it's an entirely different story.

The container houses a high-voltage mid-frequency power supply and all the control- and optimization-systems necessary to operate one ESP field. The pre-installed equipment includes an insulated gate bipolar transistor (IGBT) mid-frequency inverter, a high-voltage transformer rectifier, a PC with monitoring and optimization software and all required cables for conducting pre-installed test procedures. Advanced power electronics and proprietary software optimize energy usage and reduce harmful plant emissions. All that's needed are some minor adjustments to adapt the unit to specific local conditions.

Setup and commissioning of the Siemens mobile ESP test unit generally takes just one business day—*that's roughly a third of the time required to construct a test installation on-site from the ground up.* More important is the fact that this containerized system can be installed with little or no interruptions to a facility's ESP operation. A typical test installation duration is 30 days.

Siemens Industry, Inc.
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For more info, enter 35 at www.MT-freeinfo.com