

Lévis incinerator in Québec, Canada has successfully installed the first ACF5000 Analyzer CEMS system in North America



Ville de Lévis in Québec, Canada turns to ABB to protect its air quality and improve waste management by making a good long-term investment in ABB's ACF5000 Analyzer CEMS system.

Background

The city of Lévis, just across the St. Lawrence River from Quebec City, relies on monitoring equipment from ABB, the global market leader for continuous emission monitoring systems (CEMS), to keep tabs on its incinerator's emissions. The first analyzer of its kind to be installed in North America helps managers optimize processes too.

The 40-year-old incinerator's in the eastern Canadian city of Lévis burns about 53 million pounds (24,000 metric tons) of waste annually, at a temperature above 950 degrees Celsius. This helps keep household waste out of landfills.

When the incinerator's coordinator began modernizing the plant several years ago, one goal was to boost sensitivity of the instruments that continuously measure different components of the gas exiting the stack.

This not only reassures citizens and regulators that emissions meet the region's strict limits for pollutants, but also provides important feedback to optimize the incineration process and now measures the greenhouse gases from the stack.

Lévis' new ACF5000 system, now in its fourth generation after ABB introduced it more than two decades ago, is significantly more sensitive and can accomplish the simultaneous measurement of 15 gas components, including HCl, CO₂, CH₄, N₂O, NH₃, NO, NO₂, H₂O, SO₂, CO, O₂.

“The main benefit we have seen with ACF5000 CEMS is the overall stability including the very stable simultaneous measurements of 15 gas components.”

Mrs Isabelle Linteau, eng., air quality advisor, City of Lévis in Québec.



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ACF5000 Analyzer CEM system installed at the Lévis incinerator in Québec, Canada. The preliminary design of the system and the project coordination was done internally by two city engineers; Martin Girard, incinerator coordinator at the time and Isabelle Linteau, air quality advisor (for reference, call her at +1 418-835-4960).

Globally, ABB is the market leader for continuous emission monitoring systems (CEMS), like the solution the company provided in Lévis, which relies on technologies jointly developed at ABB's Québec and Frankfurt factories.

Benefits

We ask Mrs Isabelle Linteau, eng., air quality advisor:
What are the main benefits of ABB and the ACF5000 Analyzer CEMS system?

“There are 6 incinerators in Canada including the city of Lévis with 140,000 inhabitants. We are handling 80 tons of waste per day and all the residential waste comes from the city of Lévis and it is being transported by truck to the incinerator.”

“When we saw that the expertise was limited to maintain the old installation, and that the performance dropped, we replaced it with ABB's ACF5000. The main benefit we have seen with ACF5000 CEMS is the overall stability including the very stable simultaneous measurements of 15 gas components.”

“Now we have measurements at the inlet and at the outlet and we are comparing the different values. Altogether it is very easy to work with ABB products and systems.”

ABB's supply to Ville de Lévis incinerator in Québec, Canada

ABB's ACF5000 Analyzer CEMs system (fourth generation). The system is very sensitive and can accomplish the simultaneous measurement of 15 gas components, including HCl, CO₂, CH₄, N₂O, NH₃, NO, NO₂, H₂O, SO₂, CO and O₂.

For more information:

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