



GORE® Filtration Products

ENERGY

Case history

GORE® REMEDIA® Catalytic Filter Bags – Municipal Solid Waste Incineration, Nishitama Eisei Kumiai, Hamura City, Tokyo, Japan

CHALLENGE

A municipal solid waste incineration plant in Hamura, Tokyo, was using powder-activated carbon injection to control dioxin/furan emission. The plant management needed a solution to two simultaneous challenges: Increasing the facility's waste incineration capacity by 14 % while mitigating the surrounding neighborhood's concerns of high dioxin/furan emission.

SOLUTION

Based on Gore's proven performance in dioxin control and support from Gore's application team, the facility decided to install GORE® REMEDIA® Catalytic Filter Bags in all three incineration lines. The filter bags worked in tandem with the facility's existing activated-carbon injection system to address the increased dioxin emission that resulted from the plant's increased waste incineration capacity. Installations were completed from November 2007 to January 2009.

RESULT

After GORE® REMEDIA® Filter Bags were installed, dioxin emission was greatly reduced from a range of 0.022–0.033 ng TEQ/Nm³ (achieved by activated carbon injection) to a range of 0.00014–0.0042 ng TEQ/Nm³ – even with the increased incineration capacity. This low emission range was maintained for six years of operation after the GORE® REMEDIA® Filter Bags were installed. The plant operator was very happy with the results, as were the residents of the surrounding neighborhood.



DATA BOX

Application	Municipal solid waste incinerator in fluidized bed furnace
Process	Emission control (dust, dioxin)
Plant capacity	160 tons/day (3 lines)
Gas flow rate	45,000 Nm ³ /hr
Operating temperature	195 °C
Number of filter bags	580/line
Total filter area	1,499 m ² /line
Emissions rate	< 20 mg/m ³
Differential pressure	1,200 Pa
Bag life	6 years
Filter material	GORE® REMEDIA® Catalytic Filter Bags

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