



GORE® Filtration Products

Case history

GORE® Low Emission Filter Bags – Secondary Lead

THE CHALLENGE

At a secondary lead smelter operating a shaker baghouse off of a reverberatory furnace, woven ePTFE membrane filter bags were installed with “normal” sewn seams. Upon start-up, the plant immediately noticed leakage of fine lead oxide fume through the stitch holes. Their initial stack testing showed unacceptably high stack emissions, exceeding their allowable stack emission limits.

Even though the original supplier used a high efficiency ePTFE membrane laminate, the leakage through the stitch holes was found to be excessive. The lead plant could not take a chance that the lead oxide fume would plug the stitch holes, given the very strict emission requirements that they operated under.

THE SOLUTION

An emergency order was placed for GORE® Low Emission Filter Bags. The new filters were rushed to the plant site, where the leaking filters were completely replaced.

THE RESULT

The new seam-sealed ePTFE membrane filters from Gore did not show any seam or other leaks. The plant measures stack emissions well below 0.5 mg/Nm³ total particulate, which keeps them in full compliance with the latest US MACT and NESHAP stack emission requirements for the secondary lead industry.

Gore continues to work with the plant on improving the efficiency and durability of the technology, which along with system optimization, enables the plant to maximize the performance of the filters.



DATA BOX

Application:	Secondary Lead Recovery and Refining
Process:	Reverberatory Furnace, Shaker-Style Baghouse
Operating temperature:	155 °C – 185 °C
Emissions rate:	<0.5 mg/m ³
Differential pressure:	1250 – 1500 Pa
Bag life:	36 months
Filter material:	Woven PTFE fabric - 8127 LET

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