MICRONICS
ENGINEERED FILTRATION GROUP

Case Study
Power Industry

Eliminating Frequent Failed Bags in Coal-Fired Power Plant's Baghouse

CHALLENGE

A 650 MW power plant in south-central USA was operating a 14-compartment baghouse filtering flue gas from a boiler burning powder river basin coal. The client was experiencing frequent failed bags, typically with the failure mode being in the middle of the bag, just above the top of the inlet baffle.

The frequent bag failures meant increased maintenance expenses, plant operation at a reduced baghouse capacity, and an ongoing risk of being out of compliance with emissions requirements.

The power plant turned to us for a baghouse solution that would address the set of issues eroding the middle of the existing filter bags that had utilized 28-ft long filter bags with a 2-piece cage design.

Before – Frequent Failed Filter Bags

After – SOLAFT® StarBag™ implementation resulted in significantly improved baghouse performance

SOLUTION

After a thorough evaluation was performed by the Micronics team, we determined that a solution was needed that would clear the exposure of the filter media to the dust-laden gas stream blasting horizontally over the top of the inlet baffle. The SOLAFT® StarBag™ was selected as the engineered filtration solution, providing an improved filtration area which also helped to lower the baghouse air-to-cloth ratio.

After an initial successful trial in 3 of the 14 compartments, the plant leadership was convinced that our SOLAFT® StarBag™ was the appropriate option for addressing the inherent issues with their baghouse system and proceeded with full baghouse deployment.

Our filter media selection resulted in only a 12-month ROI and numerous quantifiable improvements:

- 99% baghouse demand availability.
- Reduction in maintenance expenses from weekly expenditures to an annual inspection.
- 30% reduction in differential pressure drop for our SOLAFT® StarBag™ vs. traditional bags.
- 35% reduction in future baghouse changeout expenses since the SOLAFT® StarBag™ utilized a single-piece cage design vs. the prior 2-piece cage design.
- Eliminating ongoing threat of emissions excursions and associated penalties due to failed bags.

You can rely on the Micronics Engineered Filtration Group to be your proven single source for solving complex baghouse challenges.

MICRONICS SFM CPE AFT SOLAFT UPC NFM Filterfab