



Cement Kiln

Western USA

Initial Conditions

A cement company, at an elevation of 7300 feet, operates two 1200 TPD Kilns utilizing ESP's. In 1996 it was decided to retrofit the ESP on line 1 with a pulse jet baghouse. Micropul converted the ESP casing into a two-compartment baghouse with a single hopper. The bags selected were 22 ounce woven fiberglass with an expanded PTFE membrane, Tetratex style 6255 high efficiency membrane material.

Conditions			
* Design Flow	<u>160,000 ACFM</u>	* Air to Cloth Ratio	<u>3.82:1</u>
* Particulate Size	<u>< 44 um</u>	* Temperature	<u>420°F</u>
* Inlet Grain Loading	<u>72 gr/ACF</u>	* Outlet Load 0.005	<u>gr/ACF</u>
* Inlet Velocity	<u>500 fpm</u>	* Bag Life	<u>4 Years</u>

Success Story

In January 1996 2300 filter bags, 6-inch diameter by 14 foot long, were installed. The clean air plenum was divided into 8 compartments of 289 bags each. The unit is operating at 115,000 ACFM, inlet velocity is 210 fpm, and the pressure drop is 3.5 inches WG. The outlet loading is less than 0.003 gr/ACF.

Summary

The retrofit is in its fourth year of operation. It has been so successful that the second ESP is scheduled for a similar retrofit. During the four years of operation only the clean air plenum doors had to be replaced.