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Cement

Alkali By-Pass Baghouse

Northern USA

Initial Conditions

In 1991 Micropul built two Alkali By-Pass baghouses for a large cement manufacturer. The baghouse was originally fitted with conventional 22 oz. Woven Fiberglass filter bags. These bags were found to blind, and were lasting less than a year resulting in untimely plant shutdowns. The solution was the introduction of Tetratex® High Efficiency expanded PTFE membrane bonded to 22 oz. Fiberglass. Due to the physical characteristics of the "sticky" cement kiln By-Pass dust being captured, the challenge was for Tetratex® to overcome these costly filter bag failures.

Conditions

*Operating Flow	844,000 CFM	*Air to Cloth Ratio	3.9:1
*Pressure Drop	<5" w.g.	*Temperature	500° F
*Baghouse Type	Pulse Jet	*No. Compartments	32

Success Story

In August 1997, 5,712 Tetratex® Membrane filter bags, 6 inch diameter by 12 feet long, were installed. With the installation of the membrane bags, the baghouse engineer noticed an overwhelming increase in flow without the blinding problem associated with conventional fiberglass. This baghouse, with the help of the membrane bags, was operating with a pressure drop of less than 5"WG. The release properties of Tetratex® membrane bags insured the increase of production and eliminated the unscheduled shutdowns.

Summary

With the daunting task at hand, the membrane bags succeeded with the increase of production for over 4 years of operation. This cement plant has not experienced any unscheduled production shutdown since the installation of Tetratex® membrane bags. Currently only membrane bags are used at this plant.