Case Study

Cement Producer, Canada – GORE® LOW DRAG Filter Bags

Optimize operations for greater clinker production rates and decreased energy consumption

Challenge

Cement producers need filtration solutions that meet both their productivity goals and their bottom line. When a cement plant in Canada looked for ways to improve operations in its pulse-jet baghouse — including improving its overall kiln feed rate — it needed a simple solution that didn't require adding more modules to the baghouse.

Application	Cement kiln, pulse-jet baghouse
Collector manufacturer	Fives Solios
Filter material	GORE LOW DRAG Filter Bags (22 oz, fiberglass)
Gas flow rate	364,603 acfm
Operating temperature	120 °C
Total number of bags	3612
Filter drag	kPa/m/min < 2.2
Differential pressure	100 mm W. G.

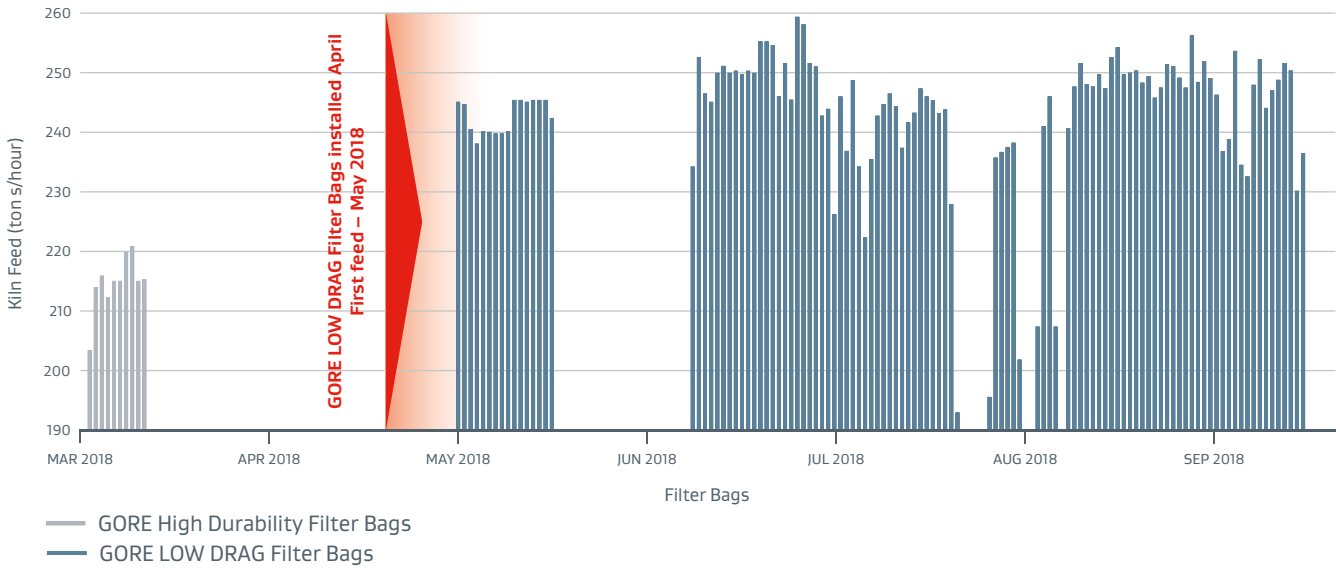
Solution

The plant had long partnered with Gore and had GORE® High Durability Filter Bags installed. To meet the goal of consistently high kiln feed, the plant saw the need to improve airflow, leading them to select and install GORE LOW DRAG Filter Bags. These bags incorporate an entirely new class of membranes that significantly increase airflow through the baghouse while proving to lower differential pressure. The desired result is increased airflow with lower fan RPM, savings through reduced fan energy, and greater clinker production rates.

Results

Following the installation of GORE LOW DRAG Filter Bags in 2018, the cement plant saw significant improvements in just three months: 14% higher kiln feed rate (from 220 tons/hour to nearly 250 tons/hour), 12% lower DP, 11% greater airflow, and 12% lower fan motor RPMs. Additionally, these results were met without the capital cost of additional baghouse modules. It was a simple change of filters, whose filter drag was recorded at 26% lower than the previous filtration solution.

Cement Plant in Canada – Increased kiln feed rate



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