



Gore™ Filtration Products

Chemicals Industry

Case history 11

Hydrated Silica

OPTIMIZATION POTENTIAL

Spray dryer baghouse was experiencing high emissions and pressure drop typically associated with use of conventional aramid filter bags. Analysis also showed that shrinkage of the snap band materials in the bags produced a significant gap in the snap band covers. Additionally, use of poor quality cages resulted in broken horizontal welds which damaged the filter body materials on the conventional filters.

SOLUTION

Conventional filter bags were replaced with GORE™ High Durability Polyimide/ePTFE Felt filter bags on new cages. The blended material was also used on the snap band covers to correct their dimensional instability. The system was then optimized for the new flow rates.



RESULT

Using GORE™ High Durability Filter Bags emissions were significantly reduced and much lower pressure drops were achieved. The new blended material corrected the dimensional instability issues associated with the previous aramid product. Baglife, which was previously only 29 months, has already exceeded 38 months. Based on a 48 month life expectancy, a 4 year guarantee was issued.



Photo: Duopharm GmbH

Application:	Silicate Production – Spray Dryer Baghouse
Process:	Spray Dryer
Plant capacity/production rate:	7–7,5 tons per hour
Gas flow rate:	71.000 m ³ /h
Operating temperature:	80°C
Total filter area:	1.635 m ²
Emissions rate:	Non detectible
Differential pressure:	1.400 – 1.700 Pa
Bag life:	3+ years
Filter material:	GORE™ High Durability Filter Bag Polyimide/ePTFE Felt

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