

POROUS MEDIA® CASE STUDY

BAG FILTERS OPTIMIZATION

PROBLEM

A large US chemical plant that manufactures monomer for paint coatings was spending more than \$90,000 per year on bag filters.

The bag filters were supposed to remove catalyst carry over from batch reactor.

Problems arose with the bags breaking and by-pass from poor sealing. Two batches per day was maximum production.

SOLUTION

Pentair Porous Media analyzed their process and recommended it's V-MAX® Technology. V-MAX® is a coreless element that flows from the inside-to-the-outside like a bag filter but offers a longer online life at roughly HALF the diameter. This is possible because the V-MAX® design offers up to ten times the available filtration media in the same element envelope.

After only 2 hours (vs. 4-6 hours with bag filters), product clarity was reached. This allowed three batches of monomer to run per day.

V-MAX® technology lasted 3 times longer than conventional bag filters.

Operators did not have to pull bags out that were stuck in cages. It was so easy and simple, just about anyone in the plant could now be assigned that job.

First year of upgrade ≈ \$45,000 per year

A 50% operating cost reduction.

A brief summary of V-MAX®:

- **Effective Contaminant Removal**
The V-MAX coreless elements utilize high-performance media technology to allow very high efficiency removal of contaminants. It is constructed to allow effective use to high differential pressure.
- **Increased Online Life**
Compared to conventional bag filters V-MAX® can offer 3 – 5 times longer online life at similar effluent fluid quality.
- **Faster Processing**
Due to the improved media technology and the opportunity of effective single-pass purification, V-MAX® purification time can be reduced by up to 90% when performing batch filtration or drumming operations.
- **Improved Operating Ergonomics**
The design of the system enables rapid and easy element installation and replacement.

