

Process Improvement for Fragrance Manufacturer with a Steri Funda

Summary

A fragrance manufacturer was frustrated with their old filtration process that used an unreliable porous stainless-steel filter that collected catalysts inside porous metal tubes. The tubes would constantly clog with fines – resulting in downtime, inconsistencies, and off-site chemical cleaning.

Steri worked closely with their process engineers to understand the production process. The solution was to use an appropriately sized Steri Funda filter for their application. Since the installation of the Steri Funda filter, the fragrance manufacturer has been extremely pleased with their investment bringing consistency and reliability to the process.

Problems in a Process

A New Jersey fragrance manufacturer was frustrated with a bottleneck in production due to inconsistencies in their filtration process and were looking for a more reliable filtration solution. The manufacturer's process consisted of hydrogenation using Rhodium on Alumina and Palladium on Carbon catalysts.

In the manufacturer's current setup, they used a porous stainless-steel backwash filter similar to a Candle filter, but with a few differences. The filter elements pointed upward, and filtration flowed from the inside outward of the filter elements. The filters would collect catalysts on the inside of the tubes allowing the filtrate to pass through. Due to the tortuous filtration flow path, over time and use, the filter media clogged with fines and needed to be physically removed from service and sent out for chemical cleaning.

How Steri Improved Their Process

We worked directly with their process engineers to understand the technical and commercial requirements and overall expectations of a new filter. The engineers wanted reliable, repeatable filtration that could discharge a dry cake. Knowing this allowed us to customize our filtration solution to meet the specific needs of the manufacturer.

Our proposed Funda Filter would provide trouble-free, contained operation, with replicable results and an efficient dry cake discharge system. The type R-5m² Funda was appropriately sized to handle the highest solids loading and maximum catalyst volume cake at a filtration rate of 4,000 – 5,000 liters per hour. The Funda filter was designed to hold a maximum filter cake volume of 200 liters per reaction batch and process it within 90 minutes, as desired.

The Results

Since the installation of the R-5m² Funda Filter a few years ago, the manufacturer has been extremely pleased with their investment in Steri Technologies. The Funda has made consistent, repeatable filtration an easy process. The overall quality of the equipment and the filtration performance of the filter has eliminated an offsite cleaning step in their process surpassing the manufacturers expectations.



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