CASE STUDY

Global Filter improves fermentation process and increases profitability.

THE FILTRATION PROCESS IS A CRITICAL COMPONENT OF ENSURING THE FERMENTATION PROCESS IS EXECUTED PROPERLY.

To address process concerns and improve the production of high purity enzymes at a chemical facility in the Midwest, Global Filter worked diligently to evaluate their fermentation process and provide a customized and cost effective solution that achieved their operational goals.

GLOBAL FILTER
Filtration Group®

CASE STUDY

APPLICATION OVERVIEW

A globally operating chemical facility based in the Midwest, produces high purity enzymes that transform corn starch into cyclodextrins (sugar molecules). Cyclodextrin is used in drug delivery and in many cases is used as an ingredient in commercial food products. The facility's cyclodextrins are also a key component in many pharmaceutical applications. To produce these products the processes require them to follow strict guidelines for quality and consistency which necessitates high efficiency and repeatable filtration. Their high integrity and quality guidelines have lead them to be recognized as a global leader in this industry for many years.

THE CHALLENGE

Poor filtration has significant impacts to final products and increases overall operating costs.

The production of the high purity enzymes is a cost-intensive process requiring strict process procedures. This facility in particular was experiencing issues of poor filtration quality, decreased operational filtration life, and increased downtime. The combination of issues led to increased operating costs. Additionally, the poor filtration quality introduced concerns for the ability to meet the standards set forth for the production of their products as well as facility requirements.

THE SOLUTION

Providing 15% longer life and 20% lower initial pressure drops while offering a 15% per unit price savings.

After engaging Global Filter to develop a solution for their process, Global's team of filtration specialists made visits to the facility and performed a full filtration audit; reviewing current processes with the intention of increasing filtration efficiency, reducing downtime, and decreasing overall costs. After completing the audit and discussing options with the plant personnel, Global Filter offered competitive replacements from their current filtration products that would not only reduce initial costs but would optimize their process and increase profitability. A few of the solutions identified included Food and Beverage Grade 0.45-micron Nylon 6,6 and Pharmaceutical Grade 0.2-micron membrane cartridges. These changes offered 15% longer life and 20% lower initial pressure drops while offering a 15% per unit price savings.

Because of these successes, the facility also evaluated other areas for improvement and replaced their sterile fermentation air filters to Global Filter's Pharmaceutical Grade PTFE membrane cartridges. This has also led to increased operational life and decreased overall cost.

THE RESULTS

Developing solutions that help in achieving our customers goals for their process is what we deliver.

After a thorough review of the facility and the customer's filtration processes, Global Filter's Engineering and team of filtration specialists consulted with the facility's personnel to offer higher quality filtration options. They discovered the underlying filtration issues, understood their goals, and offered more cost-effective, higher performing alternatives. Changing to the Global Filter products offered additional operational filter life, decreased downtime, and lowered overall facility costs.

Global Filter offered competitive solutions that not only reduced initial costs but optimized their process and increased profitability.

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