Customer Success Story: Filtration of vegetable and animal oil and fats

Market Served Food & Beverage



Eaton sweetens food processing with new filtration solutions in Italy

Location: Italy

Challenge:

The high cost of filtration was obstructing food producer's competitiveness and profitability

Solution:

Eaton's HAYFLOW™ filter element that combines the best of both bag and cartridge filters into one single filtration element for outstanding filtration performance

Result:

An optimized filtration system that reduces valuable product loss plus significantly lowers filtration, maintenance, and disposal costs With up to 70 percent greater surface area than a standard filter bag to help reduce operating costs, the Eaton HAYFLOW filter element also features highly efficient filter media, and superior waste-holding capabilities.

Background

While pasta and garlic may be the favorite culinary treats for most residents of Italy, the country – like many others – also has its lovers and cravers of chocolates, cakes, candies, and other sweets. Helping to satisfy those cravings is a locally based processor of vegetable and animal fats who makes the key ingredients required in the confectionery industry.

One of those ingredients is lard, made from pig fat. Not surprisingly, the process requires a filtration system to produce good quality, clean lard. The process is continuous, running 24 hours a day, seven days a week. During that time, temperature and flow rates must be precise in order to keep the lard in the required liquid stage during its processing.

From 2006 to 2010, Eaton's DURAGAF™ extended life filter bags were used at the facility to properly handle the demanding challenges.

Challenge

However, another type of challenge soon developed for the confectionary supplier. In order to be more competitive, the company wanted to lower costs. Too much product was being lost, disposal costs were too high, and maintenance costs needed to be reduced.

All of those challenges had to be addressed in order for the supplier to maintain its high standing within the food industry marketplace. That eventually led the company on a search for a new filtration system, and it returned to its local filter distributor for a new solution.



Solution

That distributor once again recommended that they go with Eaton and try its new HAYFLOW filter element, which was ultimately installed.

The HAYFLOW filter element combines the best of both bag and cartridge filters into one filtration element for consistent, cost-effective performance. Less process steps are required, significantly reducing changeouts and product waste. In addition, energy consumption reductions contribute to bringing about important sustainability benefits - a key objective for most European companies, and one that is equally so with Eaton and an area in which the company is always willing to assist.

With up to 70 percent greater surface area than a standard filter bag to help reduce operating costs, the Eaton HAYFLOW filter element also features highly efficient filter media, and superior wasteholding capabilities. The single filtration element also is easy to retrofit to existing vessels like those at the Italian plant.

Result

Their before and after results with the new HAYFLOW filter element are staggering and include:

- Twenty-four hours of bag life versus the former eight hours
- One daily use of filter bags versus the former three
- Five kilograms (11 pounds) of daily product loss versus the former 15 kilograms (33 pounds)
- Forty-five minutes of daily maintenance versus the former 135 minutes

On an annual basis, that translates to 14 tons of reduced waste, 720 fewer cleaning cycles, and 540 hours of reduced operator labor.

It doesn't get any sweeter than that.



HAYFLOW filter elements The best of both bag and cartridge filtration.

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