

Case Study

Food Manufacturing Facilities



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This major food manufacturing facility was experiencing issues with performance of its air delivery system. MANN+HUMMEL was asked to help.



PROBLEM

Poor air quality causing unsafe work environment



SITE

Food manufacturing facility in the Northeast



OUTCOME

Products are safe and secure from airborne contaminants and efficiently maintaining their air filtration system

Immaculate air quality in food manufacturing facilities is not only a regulated standard by the FDA but also a great concern and focus for our consumers. At MANN+HUMMEL, our Air Filtration Americas team excels at providing solutions to ensure the purest air and highest level of safety for our customers.

While conducting a standard procedural audit, a partnering distributor located an issue in a food manufacturing facility's air filtration system with their pleated filters and provided a more appropriate set of filters for the application.

Due to the nature of their facility and the products created there, the manufacturing plant exhausts a large amount of air. Also, their HVAC unit brings 100% of their air in from outside rather than recirculating the air within the plant. When bringing in that outside air, they must filter out bugs and other airborne contaminants, including those impacting their air quality due to the railroad track located next to the facility.

The food manufacturing facility also produces an excess amount of oil that is exhausted on the facility's roof. The oil clogs the filters, therefore requiring the plant to change their filters as often as every 2 months. Furthermore, the food manufacturing facility found that their air filters had been completely blown out of place, leading to the conclusion that moisture was an additional concern for the facility when bringing in outside air.

The integrity of the filters cardboard frames were compromised due to the combination of oil and moisture, hence the pleated filters failed catastrophically in less than 2 months (see image included). This created bypass through the space between the pleats given the lack of a tight seal, which meant the filters were not actively filtering out particles and contaminants entering the building. The combination of these factors allowed for potentially hazardous conditions in their food manufacturing processes and the products being produced.

The distributor knew they needed to try a new strategy and recommended the industry known Tri-Dek 2 ply panel filters. When speaking to the MANN+HUMMEL distributor who audited the facility after necessary filtration changes were made, the distributor said, "The Tri-Dek filters provide true system efficiency due to the way the filters completely seal the filter housing, eliminating air bypass. This protects the equipment and can provide improved air quality downstream." After using the Tri-Dek 2 ply panel filters, the food manufacturing facility's HVAC system efficiency and filtration improved. These improvements were due to the Tri-Dek filters 'self-sealing' properties, thus eliminating air bypass and reducing the amount of contaminants in the air. The Tri-Dek filters' moisture-resistant properties also helped as it was able to handle their excess oil and moisture issues.

Now, the food manufacturing plant is keeping its process and products safe from airborne contaminants, efficiently maintaining their air filtration systems.

"The Tri-Dek filters provide true system efficiency..this protects the equipment and can provide improved air quality downstream."



BEFORE M+H FILTERS



AFTER M+H FILTERS



AFTER M+H FILTERS



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