THE WORLD LEADER IN CLEAR AIR SOLUTIONS

Right Air Filtration Solution Saved Leading F&B Industry's Time and Money

CASE STUDY - FOOD & BEVERAGES

Customer Profile

- Location: Riyadh, Saudi Arabia
- The largest Food manufacturing company in KSA
- The factory has the region's first infant nutrition factory.
- A Saudi-based conglomerate listed on the Tadawul stock exchange.
- 3 business verticals – specializes in food, beverage manufacturing and distribution.

While manufacturing and processing food products, removal of dust particles produced inside the facility is challenging. These dust particles vary in size, which is mostly invisible and can contaminate the quality of the food produced and can threaten employee health and cause combustible dust incidents. Dust hazards can be coarse dust, sand particles, flour, corn starch, flavouring additives, eggshell dust, additives and more.

Filtration Situation

The largest food manufacturing company is in hot desert area Riyadh. It has several production lines to manufacture and process all dairy items, bread variants, rolls, frozen chicken dishes and nutritional supplements. The largest dairy farm of middle east manufactures was using competitor's air filters in its main production air handling units (AHU) to maintain good indoor air quality.

The customer was aware that even minimal air contamination may result in the rejection of the whole container. Hence, the plant was changing the filters every two weeks, because of heavy food dust accumulation specially in production lines where they were manufacture bread variants and nutritional supplements. The plant was facing additional cost on filters. The company realised the need of right air filtration system for this instance and contacted their consultant.

The consultant was asked to design the right air filtration system for the facility and demanded most advanced technological solution to continue to grow at an extraordinary rate. Also, to determine if there were any solutions that would result in cost savings. The partner company contacted AAF and asked to complete a survey of the facility to determine if there were any solutions that would result in cost savings.

AAF International Solutions

AAF recommended S-Trap, which is built to withstand harsh environments, rust free, self-cleaning, rigid design for stiff stacking and equipped with long-lasting materials. S-Trap will trap coarse dust and sand particles before entering equipment and obtained high arrestance 92% at low pressure drop.

S-Trap's smart light weight design optimise the space, weight and installation. AAF also demonstrated its ease on removing inlet grill and filtration elements for convenient inspection and cleaning. It also helped in maintaining cooling coil heat transfer performance. The customer installed S-Trap in one of their connected plant and appreciated the retro-fit option design for their AHUs.

Customer observed the heavy dust holding capacity of the unit and its efficiency in increasing the replacement time of primary and secondary filters, thus increase in the life of next stage of filters.

Fig. S-Trap

Results

Switching to AAF's heavy duty inertial filter S-Trap, next stage filters life was extended from two weeks to eight weeks. Due to the extended life of the filters, the plant decided to install pre-filters to all its facilities and realized huge cost savings in AHU maintenance. Definitively, Almarai understood the importance and implementation of right air filtration system and appreciated AAF and its partner Khamis Al Sharjah for recommending the best solution.

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