

Camfil Farr APC

Case History

GOLD SERIES® DUST COLLECTORS BRING CLEAN AIR, ENERGY SAVINGS TO CONCRETE PLANT

Wells Concrete (Wells, Minn.) wanted to combine clean air with energy savings in building a new Albany, Minn. facility for the manufacture of architectural and structural precast/pre-stressed concrete products. Many different manufacturing operations occur in the 165,000 sq. ft. production plant and adjacent finishing and concrete batch plant. Design and selection of the dust collection equipment was a complex process due to the variety of dusts that had to be handled and the requirement that the filtered air be recirculated back into the space.

High-efficiency Gold Series® cartridge dust collectors with HemiPleat® filter elements from Camfil Farr APC have met the challenge. By recirculating air back to the plant downstream of the collectors, Wells Concrete is able to save tremendous amounts of heating energy, reducing the need for natural gas and earning a rebate from the local utility.

The sandblasting bays use four Gold Series GS48 units, each equipped with 48 HemiPleat filters. The bays have flush-mounted clean air diffusers for maximum ceiling clearance, sloped dirty air duct enclosures for easy cleaning, and grated walkways of recycled heavy sheet steel which allow blasting materials to fall away for a safer working platform. The welding area is protected by a fume collector equipped with 20 HemiPleat filter cartridges and an integral HEPA safety monitoring filter.

In the wood form shop, a smaller collector is equipped with six HemiPleat filters and explosion venting to protect against the possibility of combustible dust explosions. An underground ducting and automated control system energizes the dust collection system when any wood shop equipment is operating.

According to Gregg Jacobson, Wells Concrete vice president of operations, "The dust collection systems in the Albany facility have a user-friendly design, provide easy access to the cartridge filters, and have proven to be superior to what we have in the Wells plant, especially their reverse-pulse air systems."

The HemiPleat filters have a patented open-pleat configuration, resulting in better airflow through the cartridges for more energy-efficient performance. Dust also tends to release more readily during pulse cleaning to reduce compressed air requirements. HemiPleat filters typically experience greatly extended service life and lower pressure drop compared to standard dust collector cartridge filters.

Jacobson adds: "To further conserve energy and minimize operating costs, the dust collectors have variable-speed drives that allow us to adjust their pickup airflows based on the dust volume being produced. Because of this, we received a sizable utility rebate from our local energy supplier based on annual natural gas savings that the high-efficiency dust collection equipment provides."

The project team included Camfil Farr APC representative Glacier Technology (Plymouth, Minn.) and mechanical contractor/installer Ellingson Plumbing, Heating & Air Conditioning (Alexandria, Minn.).



Collector serving wood form shop is equipped with an explosion vent and an underground ducting and automated control system.



Gold Series® GS48 dust collectors serve the sandblasting bays.

Camfil Farr Air Pollution Control

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