

CASE STUDY

Product: Gold Series Dust Collector
Size: GS96
Application: Sand and Shot Blasting of Bronze Castings
Customer: Webster Foundry - Franklin, NH
Representative: Ventilation Control Products, Inc.



Castings Call Makes Gold Series® a Star



GS96 successfully handling foundry sand containing lead and other metals.

Challenge

Webster Foundry in Franklin, New Hampshire, is a large foundry that specializes in bronze casting. They have been operating multi-shifts 5-6 days per week and have been in operation since 1914. Webster Foundry is a subsidiary of Watts Water Technologies, an international manufacturer of water flow control products, founded in 1874, with over 70 facilities worldwide.

Most of the existing collectors at Webster are bag houses, but—Webster was not happy with the efficiency or maintenance costs. Dust collection was not satisfactory at the conveyer transfer points. They are

also planning to close a facility in China and move it to Franklin, NH. To handle this increase in production, Webster needed to upgrade their dust collection systems to handle the increase in production while providing energy efficiencies.

One of the challenges faced was that the abrasive dust contained lead and silica, both regulated materials. To handle the added exhaust with the increase in production, the new dust collection system would require a filter efficiency warranty.

Solution

A dust sample was sent to Camfil Farr APC for analysis. The dust was also tested for explosivity by Fike Corporation. It was determined not to be explosive, but explosion vents were recommended to be installed as a safety precaution. Sales representative Brian Flynn of Ventilation Control Products, Inc. (VCP) and Camfil Farr APC's Lee Morgan and Matt Caulfield made a site visit in Franklin to view the process and discuss emission requirements with Webster foundry management, EHS and their contracted environmental engineering firm. Camfil Farr APC took requirements established in the meeting and used that to develop the proper air to cloth ratio, Gold Series configuration and a written filter performance warranty.

VCP and Camfil Farr APC worked with Webster Foundry management and their environmental engineering consultant on the coordination of the filter efficiency and overall project design. In August 2009, VCP installed



GS96 includes inlet backdraft damper and double AR type inlets for abrasion protection.

“ Camfil Farr APC Gold Series® is the **best looking dust collection system** we have had and we are **very pleased** with the system.”

— Webster Upper Management

a GS96 and provided a complete turnkey installation. The installation included hood design, dust collection equipment installation, ducting, a gas fired make up air unit, heavy duty abrasion resistant (AR) inlets with Rhino™ lining, system start-up and training. To meet the customer's energy efficiency goals, VCP included a premium efficiency motor and variable frequency drive (VFD) with airflow control system to maintain the design airflow as the filter pressure changes. VCP worked with Webster and their utility to get a 100% rebate for the cost of the added energy efficiency components. This VFD/airflow control system has a payback of just over one year!

This Gold Series turnkey installation had to be done around the customer's production schedule. Nights, weekends and holiday work were part of the installation process. VCP worked with Webster's structural engineer in designing and locating the numerous structural steel supports needed for the large duct system. The GS96 is now capturing dust from the hoods on the transfer points, enclosures from vibrating conveyors and shot blasting equipment unloading. It is operating efficiently at 37,400 CFM @ 19" WG while providing a safe work environment for Webster's employees. 🏠

For further information regarding this application, contact APC rep Brian Flynn of Ventilation Control Products, Inc. at (603) 786-2660.