



FARR GOLD SERIES® BREAKS THE MOLD ON FOUNDRY DUST AND FUME COLLECTION

PRODUCT

Product	Farr Gold Series® Fume and Dust Collectors
Models	GS12, GS48, GS72, 2 GS96, GS108
Application	Metalworking
Customer	Watts Water Technologies® — Franklin, NH
Install Date	2009 to 2013

CHALLENGE

Watts Water Technologies, established in 1874 as a steam valve company, is a manufacturer of water-handling components. In August of 2012, ground was broken on a 42-acre addition at their Franklin, New Hampshire location.

Building a top-of-the-line facility that would follow tightening standards (such as the Reduction of Lead in Drinking Water Act effective January 4, 2014), maintain a clean work environment, facilitate employee safety, and allow for efficient customer fulfillment were goals for the construction of the new expansion.

Brian and Kevin Flynn of Ventilation Control Products, Inc. worked closely with Watts and Camfil APC to develop systems for the older section of the foundry and were the obvious choice to assist in developing solutions for the new addition. Kevin Flynn, vice president of Ventilation Control Products, mentioned, "Ventilation Control has been doing work at Watts for many years. We sold the first Farr Gold Series® system in 2009."



▲ Fumes from liquid metal being poured for transfer in the new foundry.

CHALLENGE (CONTINUED)

A GS96 was installed on a core knockout system, which removed sand from metal castings. Kevin continued, "It was a very difficult application for Watts, so when we got the system installed and it worked great, they were very happy and had a positive image of how Farr Gold Series collectors worked." A second Farr Gold Series unit (a GS12) was also installed on their powder paint lines.

Tyler Stone, director of operations for Watts explained, "We've spent some time and effort designing what we feel is the next state-of-the-art foundry... We worked with a lot of great engineering minds to come up with what we think is the best way to make our product in today's market with today's technology." The new addition was finished in the last week of April 2013.



▲ This custom enclosure was built for sand collection.



▲ Grinding creates heavy dust, which is also being collected by the Farr Gold Series.

CASE STUDY

METALWORKING

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▲ A Farr Gold Series GS96 is used for metal fume collection.



▲ The GS108 and GS72 have HEPA filters installed to return air into the building.



▲ Fumes from melting metal are collected at the source.

SOLUTION

“Watts was looking for high-efficiency dust collection equipment, so they asked me to provide them with some information for the right type of equipment to handle the various processes they have... Sand, pouring, and finishing operations,” said Brian Flynn, president of Ventilation Control Products. Three additional Farr Gold Series dust collectors were installed and are now integral to many of the operations at Watts, offering a variety of benefits to employee well-being and the manufacturing process.

All Farr Gold Series units installed at the new foundry have a variable-frequency drive system: a 200-horsepower fan controlled by an integrated control panel to modulate the fan speed and maintain constant, static pressure as filter pressure changes. “That saves a great deal on energy and increases filter life,” Kevin Flynn mentioned.

A Farr Gold Series model GS108 was installed with a mining inlet to handle the green sand. “That enabled us to handle the large volume of sand coming into the collector in a way that any other cartridge collector would not be able to do,” added Kevin Flynn. “Camfil APC’s experience in mining really helped us to convince Watts that the Farr Gold Series would work in a sand application.” Watts was concerned about the high clay and moisture content in the sand, however Farr Gold Series units have been successful on more rigorous applications in the past — sand with higher moisture and clay content.



▲ The Farr Gold Series GS108 (left) is used for sand collection. The GS96 (right) is used for metal fume collection.


SOLUTION (CONTINUED)

For the metal melting system, a GS96 was installed with a spark trap inlet to combat potential fire hazards. The large GS96 has two inlets, of which Watts took advantage to serve different areas of the mill, saving additional energy.

A third Farr Gold Series unit, a GS72, was installed for finishing processes, specifically metal grinding and shot blasting which created very heavy dust. It has abrasion resistant inlets and channel baffles as well as HEPA filtration on the top of the unit.

The HEPA filters on the GS72 (and the GS108) allowed air to be brought into the foundry to save on heating costs during New Hampshire's brutal winters. Each Farr Gold Series unit installed moves 50,000 to 60,000 cubic feet per minute of air, which can be redirected back into the facility to heat the building.

"What we wanted to do when we created this new foundry was make sure that we were moving enough air, filtering properly, and were properly hooded so that the process takes care of itself," said Stone. "When you look at the Camfil product for this application, although a little unusual, we thought it was the best technology we could employ to provide the best environment both for cleanliness and for the environment for our workforce. We are filtering the best we can possibly filter."

"Everyone can go through their day with normal PPE, being safety glasses, steel-toed shoes, and hard hats," said Abrams. "I feel that the Camfil APC system will meet anyone's requirement and needs... I've dealt with many of the alternates and am very impressed not only with equipment quality and durability, but also with the support from both the manufacturer and the installer." 

For more information for this application, contact Ventilation Control Products, Inc. at (603) 786-2660.



▲ The Farr Gold Series GS72 is used for finishing processes.

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