

CASE STUDY

Metal Processing Fume



COMPANY OF BRASS, BRONZE AND COPPER INVESTS IN GOLD SERIES®

PRODUCT INFORMATION

Product: Gold Series® dust collector
Size: Tandem GS96 • 192 Cartridges Total
Application: Metal Processing Fumes
Customer: National Bronze & Metals, Inc.
– Lorain, OH
Representative: Rolin & Associates, Inc.

COMPANY PROFILE

National Bronze & Metals, Inc. is the leading manufacturer and master distributor of brass, bronze & copper alloys in the United States. Houston, Texas is the home of the National Bronze & Metals, Inc. corporate office but this particular installation is at their foundry in Lorain, Ohio which has been in business since 1997.

CHALLENGE

The National Bronze & Metals, Inc. foundry had been using a 196-10TR Camfil Farr Ramtube Baghouse. In November of 2009, the foundry expanded their manufacturing and warehouse facility by over 200,000 sq. ft. That expansion, came with new challenges and a need for a bigger dust collector. With the new facility, owners emphasized that the Gold Series equipment should be selected since effectiveness was a high priority over cost factors. The system needed to capture all fumes due to the hazardous lead levels generated in their particular foundry. Environment with longevity and reliability was a must. The Gold Series equipment needed to meet all EPA emission standards according to current published guidelines.



Gold Series model Tandem GS96 collecting fumes from metal processing.



Gold Series model Tandem GS96 and 250 horsepower fan.

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250 horsepower fan.



Setting the collector in place.



Installing the hoppers.

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Completed solution for National Bronze & Metals, Inc. to meet strict EPA lead limits.



Drop out box.



Inserted chains in drop out box.

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SOLUTION

In 2006, Leonard "JR" Iacco, Jr. of Rolin & Associates started working with the customer on their new effective Tandem GS96 dust collection system to capture the harmful and hazardous fumes and dust in their new facility. After reviewing the old system airflows, materials collected, and verifying the process temperatures—they were able to come to the following system design recommendations.

The Tandem GS96 is rated at 90,000 CFM with 16" of static pressure with 192 cartridges total. It has a Camfil Farr APC custom integrated drop out box and EPA driven explosion venting. JR of Rolin & Associates says, "The big decision was to use cartridges or bags. Everyone quoted bags, and only Camfil Farr APC knew that they were capable of using a cartridge collector offering higher efficiencies and filtration life as well as being able to exceed the stringent EPA emissions regulations."

The cartridges were selected to provide an optimal air to media ratio and efficiency over using bag filters resulting in a ratio of 1.8 to 1. Camfil Farr APC was able to make the system operate on a variable frequency drive keeping airflow constant with their 250 horsepower fan and have EPA driven explosion venting.

JR says, "National Bronze & Metals responded when the sale was made that after reviewing and receiving quotes from as many as six manufacturers/competitors over a two year period and reviewing all products, 'I know I made the right decision.'"



Melting furnaces operating at 2,300 degrees Fahrenheit.



National Bronze & Metals is a world wide manufacturer of bronze tubing, solids and bars.



These bars range from small solid to large diameter tubing as seen above.

For further information regarding this application, contact APC rep Leonard "JR" Iacco, Jr. of Rolin & Associates at 1-440-439-3322.

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