



● Case Study

Metabrasive Limited

Fact file

Date: 1999
Location: Metabrasive Limited-reverse, air filter plant
Product: PAS 230
Principal: Primasonics® International Ltd (UK)
Problem: The need to find an effective, cost efficient solution.

Client Background

Metabrasive Limited, part of the Allevard Group, situated near Wolverhampton; England is a leading metallic abrasive manufacturer. It prides itself on attaining both ISO and the prestigious Ford Motor Company QI Standards. The company reprocess waste metals into a range of metallic abrasives such as steel and iron shot and grit, they also produce cut wire pellets. The particulate laden exhaust gases pass through a large reverse air filter plant which consists of twelve large separate chambers each with an underhopper and discharge screw. The final cleaned exhaust gas passes up a tall flue to which is fitted a particulate opacity monitor. The filter plant's reverse air filter bag cleaning system was cumbersome and ineffective, leaving considerable particulate deposits at both where the bags emptied into each hopper and within the hoppers themselves. This resulted in periodic 'avalanches' of very fine particulate being deposited into the hopper and discharge screw which blocked that filter cell and caused particulate to escape up the flue thus triggering the opacity alarm. The company faced two considerable problems. Firstly, they received severe criticism and discipline from the Health & Safety Executive for their harmful particulate emissions. Secondly each time a filter cell blocked, it resulted in both closure of the smelting furnace and then lengthy and costly downtime to clean out the particular filter cell, underhopper and discharge screw.

THE APPROACH/SOLUTION

The Plant Engineer was charged with finding an effective, cost efficient solution and so his internet search found the Primasonics® International site. He downloaded the filter plant questionnaire, completed it and e-mailed it to Primasonics® International along with a dimensional drawing.

Safe, automated, effective prevention and removal of dry powder, particulate build up and blockages.

● Case Study

Metabrasive Limited

A Primasonics® engineer visited site and spent considerable time both understanding and evaluating the problem. Several trials were arranged to determine the most suitable model of Primasonics® Acoustic Cleaner together with the best mounting location. This led to the installation of twelve Primasonics® Acoustic Cleaners Model PAS-230 one-piece, being ring mounted on top of each of the twelve underhoppers and a suitable 'sounding' pattern established.



THE RESULT

This installation took place in early 1999 and completely cured the problems of particulate build up 'avalanche' within each of the twelve hopper sections. Metabrasive were able to meet their strict particulate emission levels and the costly plant and clean-up downtime was also eliminated.

Safe, automated, effective prevention and removal of dry powder, particulate build up and blockages.