

Innovative Solutions

Dust Collector Filter Cleaning

WITH TALK of sustainability and circular recycling becoming more and more mainstream, many companies are taking the time to revisit their recycling programs. Recycling waste streams, generated by the production process, is a great solution to meet those sustainability metrics and, in some cases, replace costs with revenue. Innovative solutions for difficult to recycle materials are appearing every year, and opportunities to recycle materials that did not have a solution in the recent past may now be available to manufacturers.

When it comes to recycling, the abrasives industry has been a leader in the adoption of recycling spent abrasives such as steel shot and brown-fused aluminum oxide. These waste streams are part of a larger system that includes not only the spent abrasives, but also the associated wastes generated from the dust collectors. This includes the dust generated from the blasting or peening processes and the filters that are contained in the dust collection system.

There are now opportunities to recycle both the dust and the filters from these processes and add to the manufacturer's list of recycled products. The associated dust streams now have outlets that utilize those waste streams as ingredients in products. In addition, the dust collector filters can now be cleaned and returned to the client, extending the lifespan of the filters and eliminating the "one and done" traditional approach. Tens of thousands of dust collector filters can be cleaned and re-used annually instead of being sent to the landfill after only a single use. There are some limitations on what filters can be cleaned, depending on the material contained in the filters, size of filters, and filter types. The most common type of filter that can be cleaned are the cartridge-type filters.

The cleaning of dust collector filters offers a significant cost savings to the manufacturer. The simple process involves boxing up the dirty filters and sending them to a company that receives, inspects, cleans with only air, and tests the filters for airflow performance as well as lightbar inspections that look for any holes in the filters. After the filters are cleaned, they are boxed, labeled, and sent back to the client. This process tracks the performance of each filter and records the performance after each cleaning. Depending on the material in the filters, some filters can be cleaned multiple times, extending the life of the filter and generating ongoing cost savings for the manufacturer.



"Before" and "After" photographs of a cartridge-type filter. It has been cleaned with air, inspected, tested, and is ready for shipment back to the client.

These recycling innovations mean opportunities for the manufacturer. Now a package of recycling solutions associated with the blasting and peening process—which involves the recycling of the spent abrasives, recycling of the associated dusts, and cleaning of the dust collector filters—offers an opportunity for manufacturers to expand their recycling programs and contribute to the circular economy.

About Wisdom Environmental Inc.

Wisdom Environmental specializes in the development of recycling programs for the business and manufacturing sectors. As the world moves towards a more environmentally friendly mindset and as landfills continue to fill and close, Wisdom Environmental serves the needs of both business and society. Wisdom Filter Clean is a division of Wisdom Environmental that specializes in the cleaning of dust collector filters. ●

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