

Happy Accidents

*When peak performance increases
by way of mix-up*

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Happy Accidents

When peak performance increases by way of mix-up.

In the safety field, happy accidents are like unicorns; and Mike Gonzales, a 32-year veteran Safety Advocate/Trainer at Hoffmaster Group Inc.'s, Oshkosh, WI facility saw his first this year, "very impressive," he says, "very impressive."

Hoffmaster is a solution-based manufacturer of specialty disposable tabletop products. For over 65 years, it has led the industry in producing the most complete line of innovative premium products with proven brands such as FashnPoint, Linen-Like, Cater-Wrap, and Earth Wise Tree Free, a line of eco-friendly, compostable products.

The production of the rather extensive paper product line that includes napkins, place-mats, lace doilies, and baking cups is done in their 500,000 square foot Oshkosh facility, and as a result produce a fair amount of fugitive dust.

Although a continual cleaning operation with a sanitation crew was in place, and two different brands of combustible dust-rated vacuum cleaners were used to regularly vacuum equipment, dust still accumulated high in the rafters, and OSHA testing confirmed that it was combustible and needed mitigation.

OSHA's directive CPL 03-00-008, instructions for administering OSHA's Combustible Dust National Emphasis Program (NEP), identifies likely areas of dust accumulation, including overhead beams, joists, and ducts. Regarding dust accumulations, OSHA defers to Annex D of NFPA 654, Standard for the Prevention of Fires & Dust Explosions from the Manufacturing, Processing & Handling of Combustible Particulate Solids.

This standard suggests immediate cleaning occur when dust accumulations reach 1/32 inch-thickness, approximately the thickness of a paper clip, over a surface area of at least five percent of the floor area of the facility or any given room. However, the standard does not recommend using this approach with floor areas greater than 20,000 square feet.

Though the NFPA standard includes a more detailed approach in calculating surface dust hazards, the OSHA directive notes that "rough calculations show that the available surface area of bar joists is approximately five percent of the floor area and the equivalent surface area for steel beams can be as high as 10 percent," revealing the need for just about any facility with exposed overhead areas and combustible dust to address this common hazard.



The MDL15 features a 15-gallon collection drum and VAC-U-MAX Venturi power unit which has the lowest compressed-air consumption on the market today.

At Hoffmaster, Gonzales knew the industrial vacuum cleaners on-site were not ideal for overhead cleaning, even with the extension tools provided, so he searched for an advanced solution, discovering VAC-U-MAX's line of air-powered combustible dust industrial vacuum cleaners that are third-party ATEX certified, meeting OSHA's Combustible Dust NEP requirements.

Belleville, NJ based VAC-U-MAX developed the world's first alternative-energy vacuum in 1954--one that operated only on compressed air instead of electricity for safe operation in New Jersey's highly combustible textile mill industry. With over 65-years of innovation in vacuum technology, application expertise in handling over 10,000 bulk powders and field-proven results, the safe design of vacuum technology is part of VAC-U-MAX's DNA.

"I didn't want to spend another \$12,000 on a vacuum cleaner—or even \$4,000" says Gonzales, "and since we have a lot of compressed air in the building, this just seemed like a simpler solution; and more cost effective."

In industrial environments where electrical power is not accessible or forbidden because of specific directives such as ATEX, in those circumstances compressed air represents an alternate source of power. Compressed air powered industrial vacuum cleaners are ideal choices for combustible dust, solids, reactive powders, and liquids when electric is limited, less desirable, or not accessible.

So, the industrial vacuum manufacturer sent a representative with an air-powered vac to demonstrate to a team of managers at Hoffmaster how the air-powered vac would function in its facility. The MDL15 Combustible Dust Air-Vac was demonstrated, a stainless steel 15-gallon compressed air vacuum cleaner.



MDL15 is compressed air operated and ATEX certified, and features a 15-gallon collection container and tool kit.

“We all tried it and were impressed with its performance,” says Gonzales. “Our rafters are 24 feet high; and, with the lightweight extension tools he brought I could stand on the floor and get at those areas. They are very efficient, so I purchased one.”

The air-powered vac is now part of the continual cleaning operation that goes around and cleans the rafters every other day.

“It is easier to use than the other vacuums we have,” says Gonzales. “The extensions work like they are supposed to, and they are lighter weight. The vac itself is lighter, it’s intrinsically safe and we are not dealing with electricity.”

“The nice thing about the VAC-U-MAX is that we can put it on a scissors lift, and the sanitation crew can take it up with them, making it safer ergonomically,” says Gonzales. “Neither of the other vacuums we have can go up on the lift because the wheels are part of the grounding system. With the air-vac on the lift, the crew can clean a larger diameter area without strain.”

With the combustible dust accumulation handled, Gonzales was able to quickly move onto other things until he received a call from the air-vac manufacturer about 7-months later. The manufacturer had mistakenly shipped a new vacuum top, intended for another recipient, but to the Hoffmaster address.

Having not seen it or heard about it, Gonzales combed every corner of the 500,000 square foot facility, but the boxed industrial vacuum cleaner was nowhere to be found.

“Finally, someone from the sanitation crew told me they already put the new top on the vacuum and how great it was working.”



VAC-U-MAX compressed air operated industrial vacuum cleaners are ATEX tested and certified, and the first line offering for Class II, Division 2 hazardous area locations. Product range includes the **CD Series** for Combustible Dust, **FL Series** for Flammable Liquid, and **SR Series** for Reactive Powder.

Mildly distressed that they had been using a piece of equipment that was not theirs, Gonzales explained that the vacuum top had to go back. “She asked if we had to because it worked better than the first, and she pointed out the bigger filter area and pulse-jet filter cleaning, advanced controls for CFM and some other upgrades,” said Gonzales.

“When equipment works better and makes a job easier, and the people using it tell you so, you listen because that task is more likely to get done regularly, and done right, so I told her I would check into how much it would cost to get one like it,” he says.

After placing the unit back in the original packaging to ship to its intended owner, Gonzales contacted the manufacturer. “I told them, the good news is, I found it; the bad news is, we have been using it,” he said.

Gonzales told the manufacturer that it was back in its original packaging, ready to ship once an address label was received and inquired about the cost of the upgrades because he “would most likely be ordering one just like it.”

“When the VAC-U-MAX rep called back he told me to just keep the vacuum top,” Gonzales said. In disbelief, Gonzales questioned him about cost, “and he said, you can have it, you are already using it. We already told the people in Illinois we will be sending a new one.”

“So, we got a \$600 upgrade for free. Very impressive,” he says, “very impressive.”

To learn more about VAC-U-MAX industrial vacuum cleaning solutions, air operated combustible dust vacs, or how pneumatic conveying creates a safer and cleaner plant environment, write to 69 William Street, Belleville, NJ 07109; call 1-800-VAC-U-MAX (800) 822-8629 or (973) 759-4600; e-mail info@vac-u-max.com; or visit www.vac-u-max.com.