Dust-Buster[®] Shredder: Frequently Asked Questions

Dust Control Management Systems

Why is foam used in shredders?

Foam suppression works very well in shredders to control dust, blue smoke and minimize explosions when shredding automobiles or other materials that may contain residual petroleum or hydrocarbon materials.

Why is foam better than water to control emissions?

Generally industrial water is very hard and is extremely difficult to "wet out" particulate emissions. Foam is produced from specially formulated foaming agents and contains surfactants that directly attract to the dust particle. Plus foam is made up of millions of tiny bubbles with a much greater surface area to trap particulate emissions, including dust and smoke.

Can I increase the water spray rates to get better control?

In some circumstances even high volumes of water are unable to effectively control shredder emissions. By adding more water in the mill the shredded material collects dirt and debris, so the processed product is wetter and dirtier. Higher volumes of water create a lot of steam during the shredding process, impairing operator vision of incoming feed material. This creates a muddy mess around your shredder, resulting in mud being tracked throughout your facility, adding to emissions and housekeeping when it dries out.

How does foam control explosions?

Foam specifically cannot control explosions. It can, however, greatly minimize the velocity and frequency of explosions. Foam helps fill the space in the shredder hood to minimize the area in which combustible gases can accumulate, so when an ignition source occurs there is less air and gas available to support the combustion.

How much of a reduction in explosions could I expect?

Each explosion has different characteristics so it is not an exact science. Users who have utilized Dust-Buster® foam suppression for 10 years or more have experienced

reductions in both frequency and velocity from 50% - 85%. Causes of explosions vary from fluids, propane bottles, airbags, and other sources. Foam greatly suppresses these explosions and can help comply with OSHA explosion mitigation requirements.

Where are the foam nozzle spray points located on the shredder?

Usually a liner bolt on each side of the hood is removed to install the foam nozzle. It is best to apply the foam on the in feed side of the material to blanket the metal prior to shredding.

Do I need to filter my water?

No, Dust-Buster systems are designed for harsh industrial environments. Unlike water-operated systems that require high tolerance water filtration, Dust-Buster systems are designed to operate using industrial water that our system will screen to 20 mesh.

How much foaming agent is required?

Depending on your shredder tonnage, generally the foam agent application rate is 0.015 - 0.025 gallons per ton of feedstock.

How long will the Dust-Buster systems operate before major repairs?

Dust-Buster systems will operate for many years without major repairs providing the system's wet lines are protected from freezing and routine maintenance is performed.

What routine maintenance is required for the Dust-Buster systems?

Routine service would be visual inspection of components, cleaning or replacing foam pads in the foam accumulator, checking chemical pump lubrication and after some period replacing seals if any leaks form.

Will the foam cause downstream screens to blind or plug?

No, foam will not cause any downstream processing issues. Since we use about 3-7 gpm of water, customers find their processed material drier and easier to pick. Also the fluff is drier and lighter for disposal.

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