

Safety Issues Prompts Insulation Manufacturer to Seek New Dust Collector

A prominent US glass fibers manufacturer was having a difficult time overcoming obstacles with its fibrous dust control application. The facility manufactures glass mat and wet chop. The end product is used to strengthen concrete, vinyl flooring, and is used in specialty papers. The dust collector the company was using was experiencing operational issues. The fibrous dust is extremely fine and bridges once it settles. With the cartridge collector they had in place the material was not entirely getting out of the hopper. This was the first issue the company faced.

Additionally, they had to spray the hoppers down with water to get the excess material out and the water would leak out of the units. The collectors are kept in ambient conditions and when the weather gets colder the water that leaked would form ice patches on the ground. Several employees had slipped and injured themselves on the icy patches around the equipment.

Frustrated with these fibrous dust control and safety issues, the company reached out to Aerodyne Environmental for a solution. After inspection of the facility and the fibrous material involved in the process, Aerodyne suggested the facility install a SplitStream dust collector with a special rotary valve attachment.

The Aerodyne SplitStream Dust Collector achieves high efficiency by forcing dirty gases into a powerful centrifugal motion. The centrifugal action throws dust particulate out of the gas stream. A secondary air stream carries the dust particulate to the hopper, keeping dust away from the collector walls and reducing sticking and abrasion. As a result, the SplitStream virtually eliminates maintenance problems common to other types of cyclones. The prevention of particulate contact with external walls is a major factor in the unit's ability to achieve high efficiency ratings. Since the SplitStream does not use bags or filter cartridges, the collected product is easily returned to the process for reuse or sent out for disposal.

The plant's fibrous material is removed in the SplitStream, falls into the hopper, and then is removed from the hopper with a special rotary valve. The rotary valve for this application has an over-sized rectangular flange which allows the fibrous material to fall easier into the valve and pulled out of the cyclone hopper. With the SplitStream dust collector and rotary valve added to the application, the glass fibers manufacturer's troubles with fibrous dust control were eliminated, and the safety of the shop is back to where it should be.