



Stringy Rock Wool Insulation Fibers Don't Bridge or Plug in Torit® PowerCore®

INDUSTRY: Rock Wool Insulation

PROBLEM: Ineffective tubular baghouse that regularly plugged with the fibrous material

SOLUTION: The new Torit PowerCore dust collector with PowerCore filter packs



This small Torit PowerCore dust collector (circled) was tested at a large fiberglass factory because the old baghouse (shown behind the Torit PowerCore) often plugged with the rock wool fibers.



After 400 production hours on the Torit PowerCore unit, the factory manager said he was "impressed with the cleanliness of the clean air side" of the filter chamber.

The fibrous nature of rock wool (a.k.a. glass wool or fiberglass) makes it perfect for insulation in homes and buildings all over the world. But this same stringy fibrous quality makes it difficult to produce, handle, cut, and shred. At this major European manufacturer of rock wool insulation blankets, the material nests on itself inside the dust collectors, often causing a bridge between filter bags that plugs airflow.

When an existing tubular baghouse needed replacement, the production manager called Donaldson® Torit®, searching for a better solution.

The production manager agreed to test one of the new smaller, smarter Torit® PowerCore® dust collectors on part of a production line, to see if it could meet the challenges of the fluffy, agglomerative rock wool trim pieces.

400-Hour Production Test Results:

- No bridging between filters
- No plugged filters
- Pressure drop stabilized at 1"wg*
- After 400 production hours, the manager was so impressed that he ordered a Torit PowerCore unit large enough for the entire "D" production line. The result on the D line will become the benchmark for lines A, B and C.

Bridging occurs in baghouses because the pulse-cleaning knocks accumulated dust down the length of the filter, and often it accumulates in the upper and lower interstitial spaces. On material like rock wool that tends to stick to itself, the accumulation builds and eventually forms a bridge that blocks airflow. Torit PowerCore is engineered with computer-modeled fluid flow analysis to manage the incoming dirty air and the velocities directed into the filter pack, avoiding interstitial problems.

Another reason bridging and plugging are prevented in the Torit PowerCore collector is the Compact Oblique Pulse Cleaning System. It is a patented, computer-modeled pulse-cleaning technology designed to match the obround shape of the PowerCore filter pack. The pulse pattern covers the entire media pack and thoroughly blows the dust out of the fluted channels in an energy-efficient manner. ○

* "wg" = pressure drop expressed in inches water gauge