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**INDUSTRIES**

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## INDUSTRIAL BOILERS

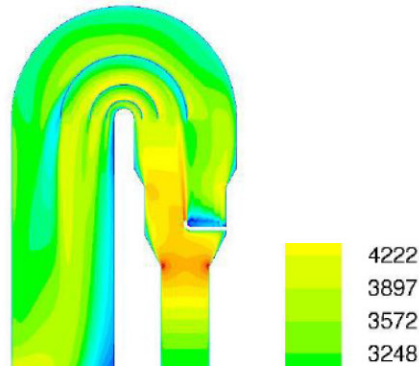
### Sonoco Products - Hartsville, South Carolina

Amerair Industries announces its successful 2013 startup of a 209,665 ACFM pulse jet collector ventilating the client's coal and biomass stoker grate boiler. The project features Amerair's Intermediate Pressure Pulse Jet Collector using 8m long (26'-3") 22 oz./yd<sup>2</sup> filter bags with ePTFE membrane. Pulse cleaning is via 3" immersed pulse valves operating at a header pressure of 35 psig.

Other features of this highly advanced pulse jet collector include: modular construction, roof door access for bag maintenance and a full weather tight penthouse. This relatively compact configuration allows the 209,665 ACFM @ 325 °F to be filtered at an air to cloth ratio of 3.3 : 1 using only 6 compartments.

In addition to the Amerair state of the art fabric filter, this project also employs Amerair's package dry sorbent injection system for control of HCl to comply with Industrial Boiler MACT emission limits allowing the client to burn biomass fuel for reduced CO<sub>2</sub> emissions. The injection system features a shop assembled, silo and redundant feed and conveying systems for 100% availability of hydrated lime feed.

Feed rate and performance of the sorbent injection system are optimized by Amerair's CFD modeling for reagent/gas distribution and proprietary injection nozzle design. HCl and particulate testing showed performance well below guaranteed limits.





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## AMERAIR INTERMEDIATE PRESSURE PULSE FABRIC FILTERS

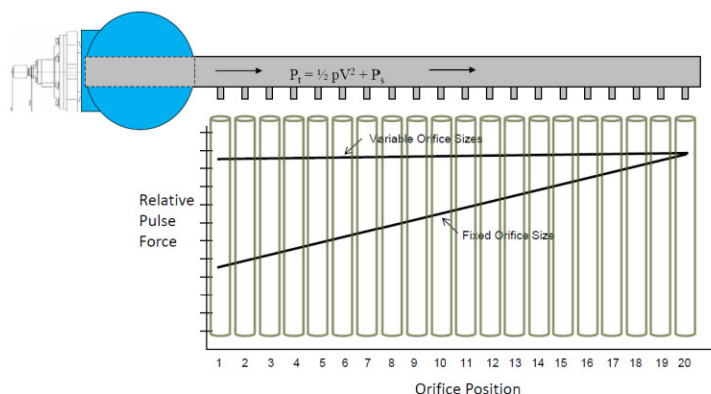
Amerair intermediate pressure pulse jet collectors feature 3" or 4" immersed pulse valves in a 14" diameter header.



Bag installation is a snap with tool-less double bead snap band installation into the cell plate.



The advanced Amerair design uses nozzle mounted pulse tubes eliminating the need for a venturi at the top of the bag while allowing for efficient pulse cleaning with the pulse of compressed air centered in the bag. Cleaning is further enhanced by balancing the cleaning force coming from each of the pulse tube's orifices by custom varying the diameter of each orifice progressively along the pulse tube.



Compartment flow management is critical to successful operation with respect to; pressure drop, bag life, and cleaning performance. Amerair makes use of high and low side flow baffles designed by CFD analysis for balanced compartment flow.

