

PROJECT UPDATE

Continental Cement, Davenport, Iowa

Amerair Industries announces a new project in progress to replace a deteriorating reverse air baghouse on the mill building roof at Continental Cement’s Davenport, Iowa facility. The project features Amerair’s Intermediate Pressure Pulse Jet Collector using 6.8m long (22’-3”) filter bags cleaned using 2-1/2” pulse valves operating at a header pressure of 45 psig to 65 psig.

Other features of this highly advanced pulse jet collector include: complete shop fabrication and insulation of the 12 module baghouse and inlet + outlet manifolds. This configuration allows for minimal field construction time and cost.

Amerair’s advanced design and attention to detail allows the plant to meet the required CISWI requirements with emissions below 3.45 mg/DSCM while ventilating their combined raw mill and kiln gas.

SUMMARY:

- Gas Flow 330,500 ACFM @ 428 F Max.
- Pulse Jet Filter: 12 Compartment
- Bags: 6” diameter x 22’-3” long, 22 oz.
- Woven Fiberglass with ePTFE membrane
- Air to Cloth 3.0 : 1
- Emissions < 3.45 mg/ Nm³

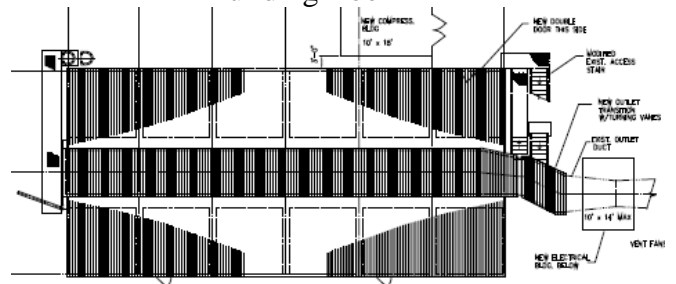
SCOPE:

This turnkey project features pre-construction on temporary supports allowing for complete demolition of the existing baghouse and installation and start-up of the new Pulse Jet within a 3 week outage.

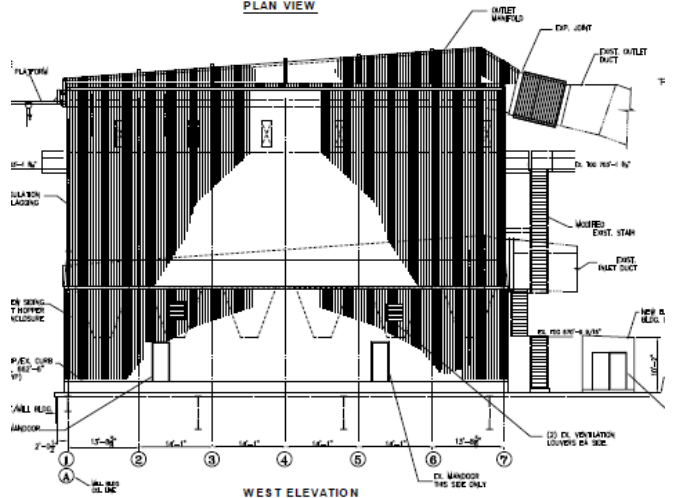


Deteriorating Kiln/Raw Mill Baghouse

New Pulse Jet Replacement on 100 ft. High Building Roof



PLAN VIEW



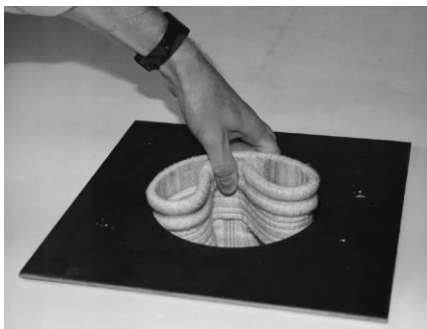
WEST ELEVATION

AMERAIR INTERMEDIATE PRESSURE PULSE FABRIC FILTERS

Amerair intermediate pressure pulse jet collectors feature a range of 2-1/2" right angle valves on dual 6" headers to 3" or 4" immersed pulse valves in a 14" diameter header.

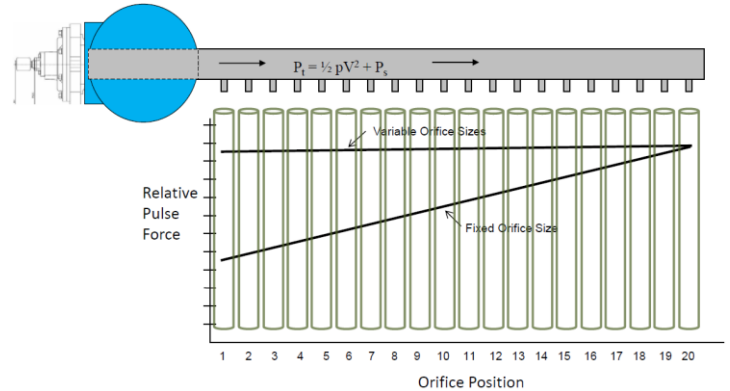


Bag installation is a snap with tool-less double bead snap band installation into the cell plate.



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 as well as the compartment inlet designed by CFD analysis for balanced compartment flow while maximizing particulate hopper drop out of high inlet cement dust load.

