



ServoTech
INDUSTRIES

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STEEL INDUSTRY

Rolling Mill EAF Project - Ontario, Canada

Amerair Industries announces its successful startup of a 700,000 ACFM pulse jet collector ventilating primary and secondary fume from the customer's 90 ton electric arc furnace melt shop. The project features Amerair's Intermediate Pressure Pulse Jet Collector using 8m long (26'-3") filter bags cleaned using 3" immersed pulse valves operating at a header pressure of 35 psig.

Other features of this highly advanced pulse jet collector include: semi modular construction and dual side pulsing allowing modular delivery of large compartments each containing 792 filter bags. This unique configuration allows the 700,000 ACFM to be filtered at an air to cloth ratio of 3.3 : 1 using 8 compartments.

Start-up in January of 2013 was accomplished on a tight schedule starting with a turnkey contract in December of 2011 including: hooding, ductwork, I.D. fans, material handling, silo and load out building, full electrical and controls scope.

Compliance testing completed within two months of start-up showed particulate emission results of $< 1.0 \text{ mg/Nm}^3$ of filtered gas vs. a guaranteed value of 5 mg/Nm^3 . Pressure drop and energy consumption all were within original guaranteed limits.

SUMMARY

Pulse Jet Filter: 8 Compartment
Bags: 5" diameter x 26'-3" 14 oz. Polyester
Air to Cloth 3.3 : 1
Emissions $< 1.0 \text{ mg/ Nm}^3$



Ductwork: 16' diameter
Stack: 14' dia., 250' high / silencer
Storage Silo/load out building
I.D. fans 2 x 50%
Electrical, MCC, Foundations

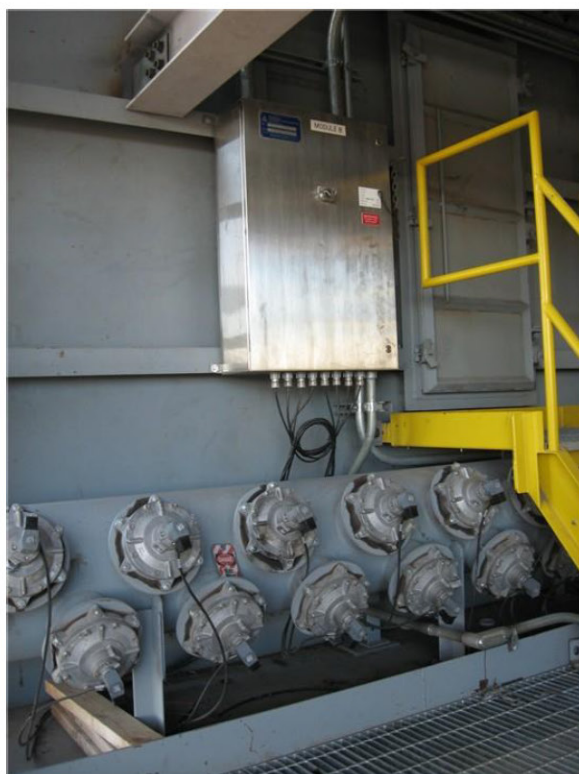


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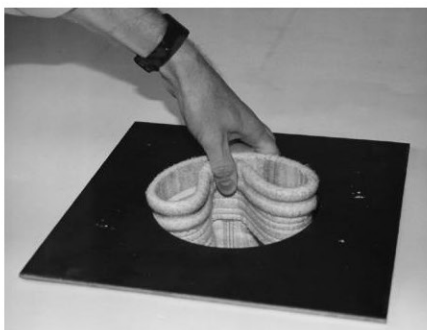
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AMERAIR INTERMEDIATE PRESSURE PULSE FABRIC FILTERS

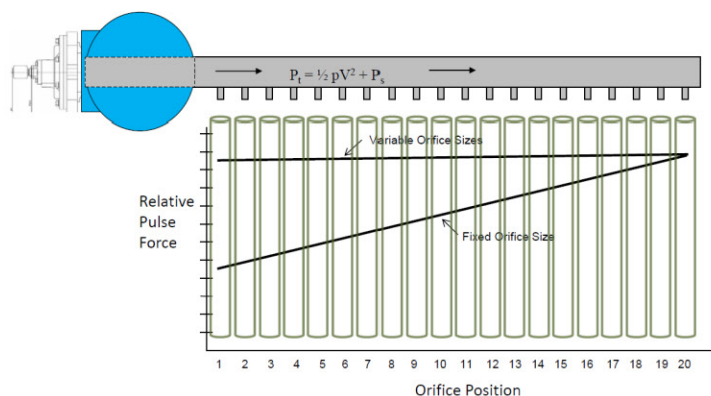
Amerair intermediate pressure pulse jet collectors feature 3" or 4" immersed pulse valves in a 14" diameter header.



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.

