

BHA® PulsePleat® Filter Elements

Canadian steel producer solved ladle melt furnace ventilation problems while reducing maintenance and compressed air costs.

Challenge:

The Proceadair™ pulse-jet baghouse ventilating the fumes from a ladle melt furnace was designed for airflow of 40,000 ACFM and an air-to-cloth ratio of 3.8:1. But differential pressures of approximately 5" to 6" w.c. were becoming frequent. The elevated resistance was impacting furnace ventilation airflow, and a smoky haze was visible in the shop.

Based on previous successful installations of BHA PulsePleat filter elements in the smelter area and various small dust collectors at this plant, the company wanted to evaluate BHA PulsePleat filter elements for this application.

Solution:

Following an on-site visit to evaluate the 840-bag unit, CLARCOR Industrial Air recommended replacing bags and cages with 500 one-meter long BHA PulsePleat filter elements. The reduction in filters was possible because each BHA PulsePleat element provided nearly three times the filtration area of a filter bag currently used.

Results:

- Air-to-cloth ratio was reduced, differential pressure stabilized, and the “smoking” by the ladle melt furnace stopped.
- By using 340 fewer filters, the plant achieved substantial savings in labor and reduced compressed air usage.

Comparison of filter surface area and airflow between BHA PulsePleat and traditional filter bags (all 6.25" diameter)

