

Applications of Fox Venturi Eductors

Case Study No. 7

MATERIAL: Talc; Bulk density: Loose - 22 #/ft³, Tapped - 59 #/ft³
Screen: 99.5% thru 400 mesh - Average particle size: 1.8 micron

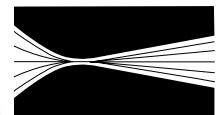
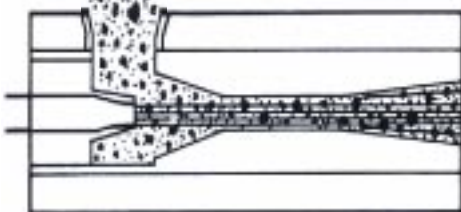
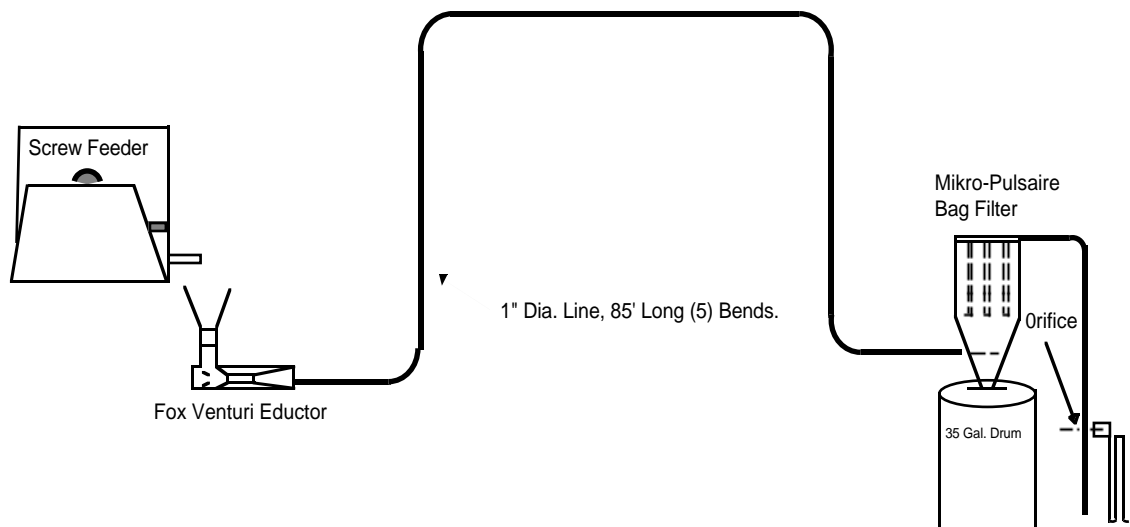
PROBLEM: This large chemical manufacturer wanted to convey relatively small quantities (2-4 pounds per minute) of extremely fine talc. They bought samples of small conveying venturi eductors from all available sources and conducted a detailed and thorough evaluation.

Results are shown below, along with a schematic of their test set-up.

The test consisted of the calibration of eductor nozzle and determining eductor performance i.e. induced flow versus back pressure. The air consumption conveying 2, 4, 6, and 8 lbs/minute of talc was also measured to determine each system's capacity limit.

RESULTS & CONCLUSION

The *Fox Valve 1" eductor* had the best performance. It had the lowest air consumption of all eductors tested and could handle three times the required talc mass flow rate. Table I summarizes the results of air consumption versus talc flow rate.



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