

Applications of Fox Venturi Eductors

Case Study No. 17

Material: Minor ingredients for food processing: Ground oyster shells - 40 #/ft³; Iron oxide fines - 250 #/ft³; spice/flavoring - 35#/ft³.

Problem: Flavoring & Additive Feed in Food Processing
A large cereal manufacturer was having problems adding very small amounts of special nutritional and flavoring additives in the production of breakfast cereal. Additive flow rates varied from only 8 #/hr up to 100#/hr. The user found that long flexible screw feeders were inadequate dispensers of these low flow rates: they could not easily reach 100 and 150' conveying distances; they could not meter the product accurately enough, and they tended to lump some of the heavier products. Conventional system with airlocks became exorbitantly expensive and a troublesome maintenance concern with these very fine, very low flow rates.

Solution: Fox 1" venturi eductors were used in combination with small, precise screw feeders to pneumatically convey the products into the cookers. Only 25 SCFM at 4 psig was needed to transport the various products through 1" food grade tubing. Installed cost was much less than installing an oversized airlock and maintenance and operating horsepower were minimal. Moreover, the operator liked the simplicity and easy cleaning offered by the eductor.

