

Macawber Installation Case Study: Sand - Minnesota, USA

IN BRIEF

A company conveying sand had an existing pneumatic transporter used a “keep system full” approach. The transporter is a 20ft³ with booster injection points throughout the convey line and was experiencing high wear. The system with an extended blow time, never met the original requirement of 10T/hr and is only capable of ~ 7T/hr. With existing silos with space constraints and lack of confidence in their existing technology, the customer was looking for an alternative approach that could fit in the available space and double the actual throughput in a true low velocity, dense phase regime. The company has successful experience with Macawber in other locations and contacted us to participate in the RFQ process. Macawber’s model 8/8-5 Denseveyor® equipped with our reliable and robust Dome Valve® fit the application and exceed their overall demand requirements. Our efficient method of distributing material into the convey line and effective technique of developing and managing the slug flow of material surpasses their specified requirements.

MATERIAL CHARACTERISTICS

Material	Sand
Bulk Density	98 lb./ft ³
Temperature	212°F (100°C)
Moisture Content	≤ 0.3
Condition	Free Flowing

SYSTEM OBJECTIVES

1. Provide an overall better solution
2. Improve efficiency
3. Achieve a specified rate

SYSTEM PERFORMANCE

Transfer Capacity	15.00 Tons/hr.
Conveying Distance	278 ft
Reception Points	1

IMPROVEMENTS ACHIEVED

1. Cost savings
2. More efficient process, less maintenance
3. The desired conveying rate was achieved with extra capacity to accommodate future needs.

