

Macawber Installation Case Study: Mixed Mortar Conveying Systems - Holland

IN BRIEF

The low velocity, dense phase pneumatic conveying system supplied conveys in 90t/h of mixed mortar over a distance of 360ft horizontal and 115ft vertical. The system uses a 52 cu. ft. vessel with a 8" pipe line. The system is located under a mixer which in turn is fed by multiple product feed hoppers. Start and stop is controlled in automatic from the central control room via an ethernet connection. The pneumatic conveyors are working very reliably and exceed the customer's expectations regarding rate transferring over 130t/h. The system incorporated multiple manifold settings allowing the transfer of a wide range of bulk materials and sizes. The system set-up is done automatically simply by selecting the material recipe. Further options have been added since the initial start-up including a four-way diverter valve and the addition of more reception silos and conveying lines. The end user is extremely satisfied with the system and the flexibility it offers considering the hundreds of different mixes that need to be conveyed.

MATERIAL CHARACTERISTICS

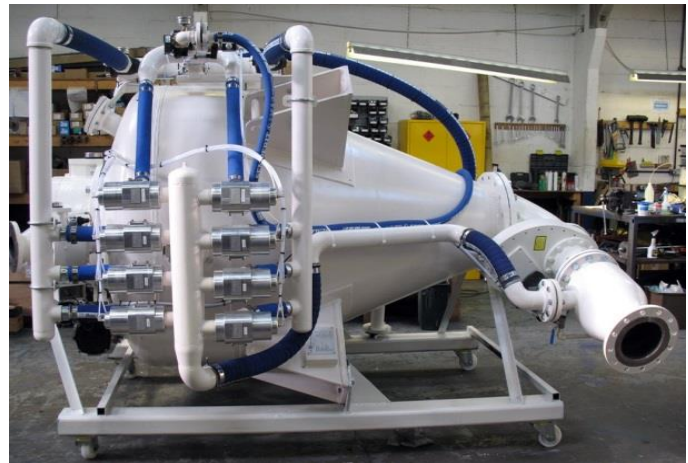
Mixed mortars	0.005" to ½"
Bulk Density	64 - 120 lb/ft ³
Temperature	140°F
Moisture Content	0%
Condition	Free Flowing with aeration

SYSTEM OBJECTIVES

1. Dense phase, low velocity conveying and low wear
3. Reliable operation
4. Flexibility to allow multiple product mixes

SYSTEM PERFORMANCE

Transfer Capacity	90t/h (actual up to 130t/h)
Conveying Distance	475ft
Reception Points	1 feed and 11 reception points



IMPROVEMENTS ACHIEVED

1. Increased transfer rate
2. Reduced compressed air requirements
3. No mixing or product between material changes

