

Macawber Installation Case Study: Cerabeads – South Carolina, USA

IN BRIEF

A customer purchased three 8/8-5 Macawber Denseveyors® to convey abrasive cerabeads (synthetic sand). Systems 1 and 2 convey cerabeads from a 150T silo to a proclaimer and reclaimer, one at approximately 125-linear feet and the other at 150-linear feet, at a rate of 20Tons per hour. These two Denseveyors® were replacements for existing systems. The customer installed a new sand reclaimer, therefore creating the need for another pneumatic conveying system. System 3 conveys cerabeads from a proclaimer approximately 155-linear feet to two existing 53Ton bins at a rate of 10Tons per hour. Due to the abrasive nature of cerabeads, these systems also contain basalt-lined elbows. Each system is equipped with 8" Macawber Dome Valves® and 15" HMI touchscreens.

MATERIAL CHARACTERISTICS

Material	Cerabeads
Bulk Density	98.1 lbs./ft ³
Temperature	≤ 230°F
Moisture Content	≤ 0.7%
Condition	Free flowing

SYSTEM OBJECTIVES

1. Increase throughput to maintain the rise in operational demand
2. Gently convey abrasive cerabeads while minimizing wear and energy consumption
3. Update previously installed equipment



SYSTEM 1 PERFORMANCE

Transfer Capacity	20.00 T/hr.
Conveying Distance	125 ft.
Reception Points	2

SYSTEM 2 PERFORMANCE

Transfer Capacity	20.00 T/hr.
Conveying Distance	150 ft.
Reception Points	2

SYSTEM 3 PERFORMANCE

Transfer Capacity	10.00 T/hr.
Conveying Distance	155 ft.
Reception Points	2

IMPROVEMENTS ACHIEVED

1. Confidence established with new, reliable systems
2. Minimized wear and generate savings
3. Improved operational reliability

