

Macawber Installation Case Study: Crushed Limestone Conveying Systems, Poland

IN BRIEF

The Macawber Macpump T150 is a single system but with two vessels. As one is conveying, the other is filling and preparing to convey. The pneumatic conveying distance is 2955ft horizontal and 65ft vertical conveying over 100t/h of crushed limestone. The convey line starts at 12" and finishes at 14". This was a challenging application due mainly to the limestone material being out of specification relative to the initial sample upon which the system was designed. However, with a few small modifications and careful optimization, the system achieved all the customer's specifications and is now working 24 hours per day 7 days a week at a power station. Batch size and sequence control is by two sets of load cells with system control selectable either from the central control room via Ethernet communication protocols or at the local panel.

MATERIAL CHARACTERISTICS

Crushed Limestone	0.0008" to 0.04"
Bulk Density	69 lb/ft ³
Temperature	104°F
Moisture Content	1.0% Maximum
Condition	Free Flowing

SYSTEM OBJECTIVES

1. Dense phase low velocity conveying
2. High transfer rates
3. Reliable operation

SYSTEM PERFORMANCE

Transfer Capacity	Over 100t/h
Conveying Distance	3020ft
Reception Points	2

IMPROVEMENTS ACHIEVED

1. Increased transfer rate
2. Reliable operation
3. Low degradation



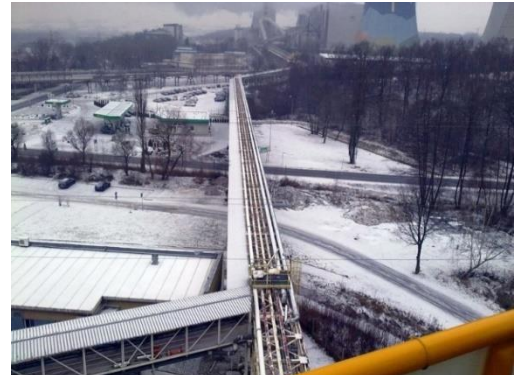
System loaded on transport vehicle



Pipe lines at the reception end



Macpump T150 installed



The convey line from vessel to reception silo – 3020 ft.