

## Macawber Installation Case Study: Fly Ash Conveying Systems - Poland

### IN BRIEF

Two systems were supplied to convey 8t/h and 2.3t/h over a distance of 262ft horizontal and 65ft vertical. The systems were 2 x 3 cu.ft. vessels on a common 4" pipe line and 4 x 0.75 cu.ft. vessels on a 2" single pipe line. Both systems are located under separate feed outlets from an Electrostatic precipitator type feed hopper with start and stop controlled in automatic by the feed hopper and silo reception level probes. The systems are working very reliably with no line blockages and exceed the customer's expectation regarding transfer rate giving a maximum of 14t/h for system 1 and over 7t/h for system 2. The pipe line conveying pressure was between 5psi and 8psi.

### MATERIAL CHARACTERISTICS

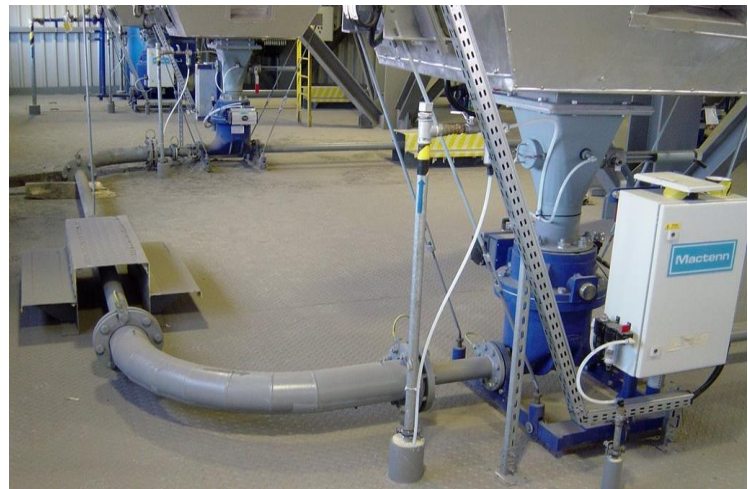
|                  |                       |
|------------------|-----------------------|
| Fly Ash          | 100% <0.004"          |
| Bulk Density     | 56 lb/ft <sup>3</sup> |
| Temperature      | 300°F                 |
| Moisture Content | 0.5% Maximum          |
| Condition        | Free Flowing          |

### SYSTEM OBJECTIVES

1. Dense phase, low velocity conveying
2. Short delivery
3. Reliable operation

### SYSTEM PERFORMANCE

|                    |                                 |
|--------------------|---------------------------------|
| Transfer Capacity  | 14t/h system 1<br>7t/h system 2 |
| Conveying Distance | 328ft                           |
| Reception Points   | 1                               |
| Feed points        | Sys. 1 = 2, sys. 2 = 4          |



### IMPROVEMENTS ACHIEVED

1. Increased transfer rate
2. Reliable operation
3. Dust free operation



Primary vessel showing conveying air supply



Another view of the first vessel showing the air reservoir