P3354

Mactenn installation case study:

Fly Ash Conveying Systems, Poland.

IN BRIEF

Two Mactenn Fly Ash systems were supplied to convey 30t/h each over a distance of up to 386m horizontal and 37m vertical. The ash systems use 1,150 liter vessels with a 150mm pipe line. Both conveying systems are located under a feed hopper with start and stop controlled in automatic by the feed hopper and silo reception level probes. The Fly Ash systems are working very reliably with no line blockages and exceed the customer's expectation regarding transfer rate and performance. These particular Mactenn systems incorporated multiple manifold settings allowing the transfer of a range of Fly Ash products over various distances. The final convey air requirement on the longest route was 21.5Nm³/min compared to the proposed 28Nm³/min resulting in a saving both in cost and air used from the compressed air system. One particular problem was a very low control air pressure resulting in a compromised sealing of the Inflatek filling valve inflatable seal. This was overcome by installing a pressure doubler and small air reservoir to provide more than sufficient instrument air pressure and excellent sealing.

Vessel after painting

MATERIAL CHARACTERISTICS

Fly Ash	0.063mm to 0.2mm
Bulk Density	550-770 Kg/m³
Temperature	200°C
Moisture Content	Dry
Condition	Free Flowing

SYSTEM OBJECTIVES

1. Dense phase low velocity conveying.
2. Short delivery.

SYSTEM PERFORMANCE

Transfer Capacity	31,500Kg/h
Conveying Distance	423m
Reception Points	1 feed and 2 reception point per system.

IMPROVEMENTS ACHIEVED

1. Increased transfer rate.
2. Reduced compressed air requirements.
3. Increased reliability compared to older system.

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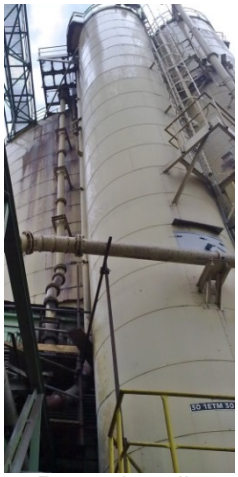
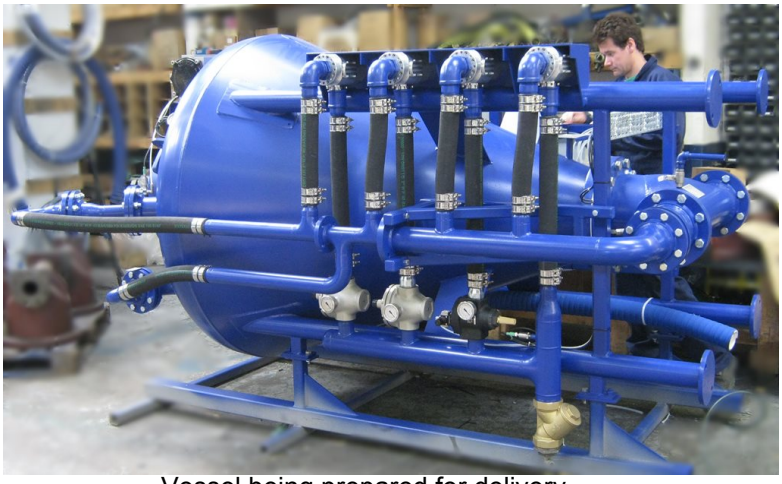
Vessel 1 installed



Reception silo



Vessel being prepared for delivery