P2406

Macawber Installation Case Study:

Bed Ash Pneumatic Conveying Systems, Sardinia

IN BRIEF

Three dense-phase pneumatic conveying systems were supplied to convey bed ash between 5t/h for the two smaller conveying systems and 56t/h for the larger system 3. Material transfer distances are between 158ft and 230ft. The ash systems use 2 x 4 cu. ft. vessels with 4" pipe lines and system 3 uses a 30 cu. ft. vessel on a 10" pipe line. All dense-phase systems are located under feed hoppers with start and stop controlled in automatic by the feed hopper and silo reception level probes to maintain empty feed hoppers and full reception silos. System 1 is used on the Economizer line with a water-cooled top plate and dome filling component to withstand the high temperatures. System 2 and 3 are standard in that no additional equipment is required to handle the 390°F material temperature. Other Ashveyor equipment supplied were switch type diverter valves, isolation high temperature knife gate valves, wear resistant bends and end diverters placed on top of the reception silos. System 3 conveyed the ash material directly in to the fluid bed of the boiler.

MATERIAL CHARACTERISTICS

Bed Ash	0.004" to 0.08"
Bulk Density	69 lb/ft³
Temperature	390°F to 660°F
Moisture Content	Dry
Condition	Free Flowing

SYSTEM OBJECTIVES

1. Dense phase low velocity conveying
2. Reliable operation

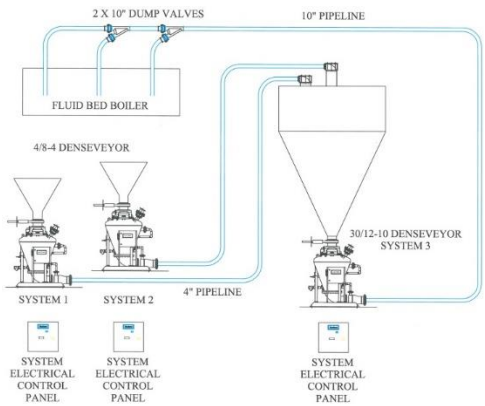
SYSTEM PERFORMANCE

Transfer Capacity	5 – 56t/h
Conveying Distance	158ft to 230ft
Reception Points	1 feed and 1 reception point per system

Power station boiler building – system 3

IMPROVEMENTS ACHIEVED

1. Increased transfer rate
2. Reduced compressed air requirements
3. Spillage free conveying



www.macawber.com
sales@macawber.com

1829 Clydesdale Street,
Maryville, TN 37801 USA

Phone: +1 (865) 984-5286
Fax: +1 (865) 977-4131