

Macawber Installation Case Study: Ground Rice Hull ASH - Pichit Thailand

IN BRIEF

After the customer purchased four x 12/12 Denseveyor® systems to fuel supply of ground rice hulls to a biomass boiler, they followed-up by purchasing reliable Ashveyor® bottom ash systems from Macawber to handle ash collected from a dust collector and ESP, as well as bottom ash. Our customer was chiefly interested in eliminating dusty conditions and pipe blockages which necessitated a lot of hosing down and near constant labor. The customer's previous systems were large blow-pot types which suffered from bridging as well.

MATERIAL CHARACTERISTICS

Material	Ground Rice Hull Ash
Bulk Density	Average 300 kg/m ³ (19 lb./ft ³)
Size	100% < 500μ, 80% < 200μ, 50% < 100μ
Temperature	Dust Collector Ash: 200°C (390°F) ESP Ash: 200°C (390°F) Bottom Ash: 350°C (660°F)
Moisture	0%
Condition	Free flowing when aerated, highly abrasive

SYSTEM OBJECTIVES

1. Elimination of dusty conditions and pipe blockages
2. Reduce air consumption from existing systems
3. Reduce pipe and valve wear
4. Operate with 1 psig vacuum in baghouse
5. Prove concept at 20MW plant

SYSTEM PERFORMANCE

Transfer Capacity	13.2Mt/h (14.5t/h) total, all systems
Conveying Distance	Average 70m (230ft)
Reception Points	One per system

IMPROVEMENTS ACHIEVED

1. System operation is stable, reliable and efficient
2. Purchased directly through end user, using local contacts; dealing with local culture
3. Systems consume 1/3 the air of their previous systems equating to valuable efficiency gains
4. Customer is using plant as a proving ground for follow up projects elsewhere in Asia

