

CASE STUDY

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Power Gen Plc of Retford, England relied on Macawber Engineering at their Cottam Power Station (4x500 MW units) to replace an existing Ash Handling System. An Ashveyor System was installed on unit #2 to continuously convey P.F.A. (Pulverized Fuel Ash) over a distance of 560 feet. The system has operated successfully since installation.

■ MATERIAL CHARACTERISTICS

Material	Pulverized Fuel Ash (PFA)
Bulk Density	53 lb/cu. ft.
Size	100% below 100 micron
Temperature	400°F
Moisture Content	Less than 1%
Condition	Free flowing when aerated, highly abrasive

■ SYSTEM OBJECTIVES

System design requirements were:

- 1) Convey P.F.A. on a continuous basis
- 2) Reliable, low maintenance operation.
- 3) Minimize pipe wear.

■ SYSTEM PERFORMANCE

Transfer Capacity	35 T/H
Conveying Distance	560 ft.
Number of Receptions	One
Air Consumption	280 scfm

- Trouble-free conveying on a continuous 24 hour basis.
- Low pipewear - Macawber provides a no-wear guarantee on pipe and bends.
- Pipeline boosters not required
- Schedule 40 pipe used
- Vessels filled via unique Macawber Dome Valve - one million cycles between inspections and maintenance free (no lubrication required).
- Compact design and low profile allows easy retrofit installation in restricted headrooms.
- Dense phase mode of conveying provides for low air consumption and reduced energy costs.

■ SYSTEM DESCRIPTION

The Macawber Ashveyor System is unique in that multiple transporters can be fitted to a common conveying line. The transporters are located directly into the pipeline without the need for discharge valves, vent valves or tees.

