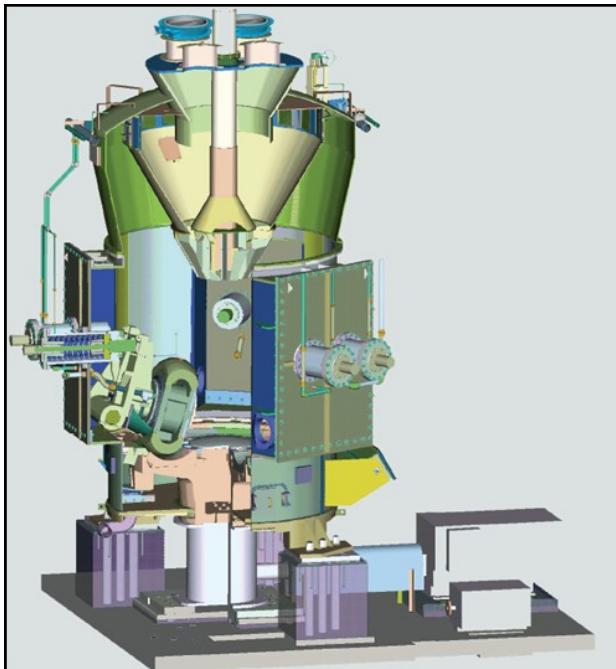


Greenbank CoalFlo® PF Balancing Damper

PF Balancing Solution for Multi-Outlet Mill Classifiers

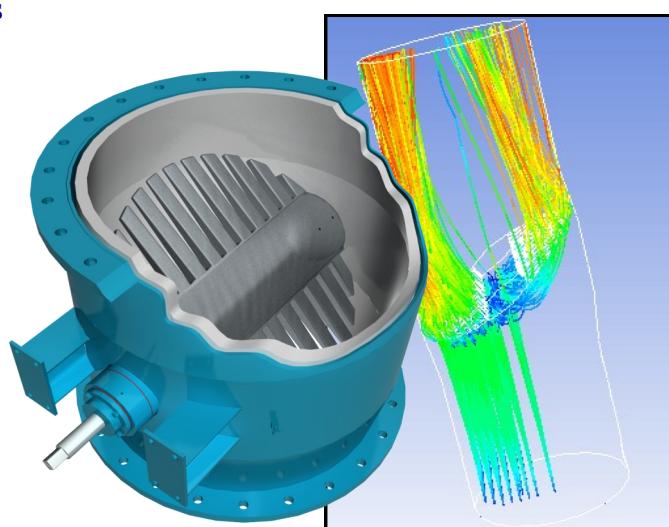


- ◆ Bespoke design specifically for coal flow balancing of multi-outlet classifiers
- ◆ Complies with PF code of practice
- ◆ Optimizes PF distribution from mill to burners
- ◆ Accurately balances coal/air flow to burners
- ◆ Balances PF line pressure drop.
- ◆ Disburses PF roping.
- ◆ Rejects excess PF particulate, not air.
- ◆ Manual or closed loop operation
- ◆ Helps reduce excess carbon-in-ash and NOx through improved combustion.
- ◆ Patent Pending
- ◆ Lined for minimum 4 years operation without maintenance

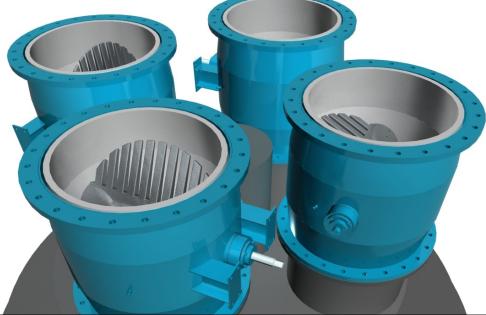
Greenbank's CoalFlo® Balancing Damper has been developed to overcome the difficulty of balancing the air and pulverised fuel (PF) down multiple pipes outlets from pulverising mill classifiers where differing pressure drops in each pipeline create unbalanced flow of air and PF to the burners, propagating poor combustion.

The Damper is designed specifically using optimized CFD analysis to suit each individual application.

The CoalFlo® damper can be installed and trimmed manually or can be connected to an intelligent closed loop balancing system which actuates each damper in accordance with the inherent pressure drop in each pipeline.



Greenbank CoalFlo® PF Balancing Damper



Features

Size range:

6" through 60"
150mm through 1525mm

Working Pressure:

7.25psi
48kPa

General Design:

NFPA8503
GDCD 215

Design Pressure:

200psi
1379kPa

Flange Designs:

DN200-DN1600
Certified Carbon
BS EN/ANSI/ASME/API/DIN/JIS
Bespoke Design

Damper Body:

Certified Carbon Steel Body

Damper Linings (from):

Zalcon, Alumina Zirconium Casting
Cast Basalt
White Cast Iron

Damper Vanes (from):

White Cast Iron
Zalcon, Alumina Zirconium Casting

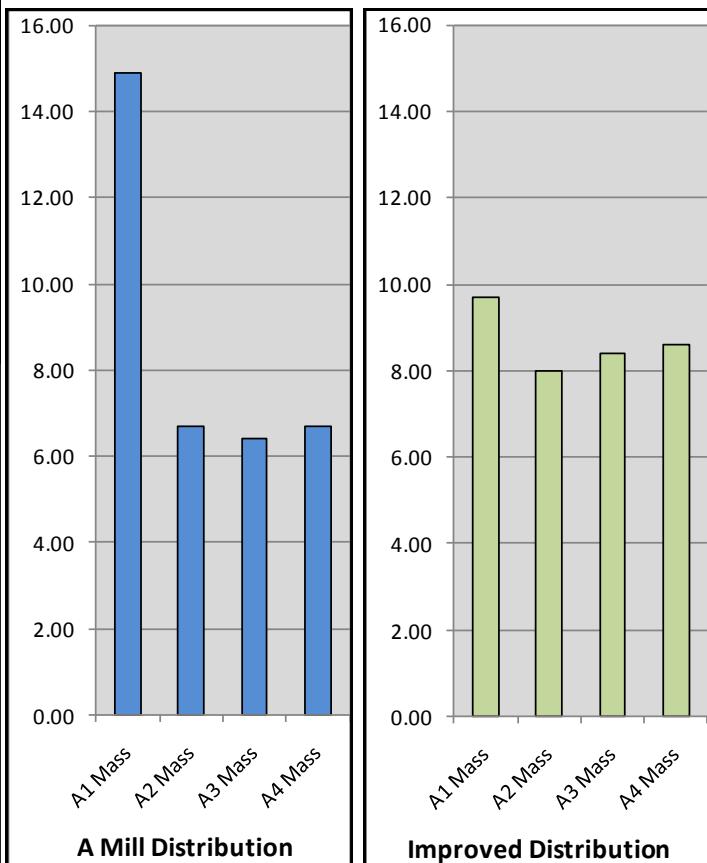
Bearings/Seals:

Labyrinth Seals
Stainless Steel Seal Self Aligning

Actuation:

Manual lever
Air cylinders
Hydraulic cylinders + positioner
Electric motor

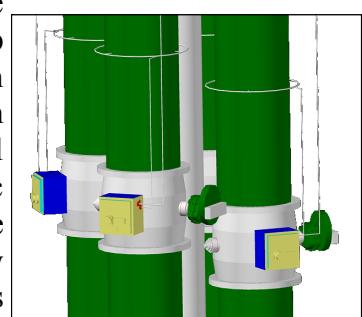
Typical Distribution Performance Improvements Expected by Installing CoalFlo® Balancing Dampers



Closed Loop Control Option

The control damper position is automatically positioned according to information read from plant conditions. It operates on the theory of balancing back pressures to equalise air flow.

The system employs industrial pressure transducers to measure the pressure drop difference along each pipe. This system includes stainless steel tubing and an automatic air purge system. The feedback constantly monitors the conditions and initiates a change every ten minutes or so to allow the system to become stable.



The control system can also accept data from other measuring devices, such as mass flow monitors and use this information to improve the feed back process. The system also allows for on-site calibration against manual sampling.

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