

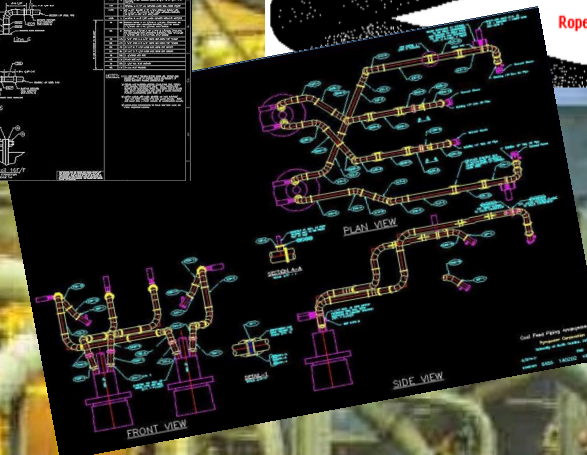
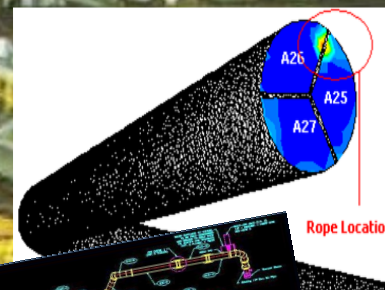
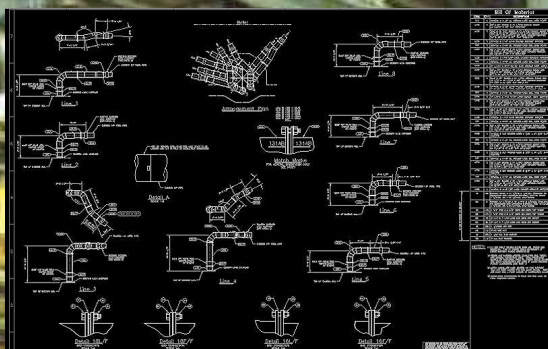
Greenbank Group USA CBP Engineering Greenbank Energy Solutions

CBP
ENGINEERING
CORP.
DELIVERING SOLUTIONS



GREENBANK ENERGY
SOLUTIONS INC

ABRASION RESISTANT AND FLOW CONTROL PRODUCTS FOR PNEUMATIC CONVEY SYSTEMS



Greenbank Energy Solutions/CBP Engineering

Product roping naturally occurs when material is pneumatically conveyed through piping systems that contain elbows. This can result in poor, unbalanced distribution of product at line splits and increase drag in the system. We offer products specifically designed to improve product flow through the most aggressive systems.

From This

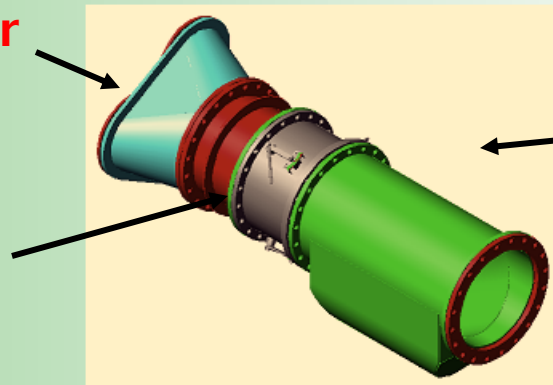


To This



Custom Splitter
Bi, Tri, or Quad

Control Gate



VARB
Variable Area Rope
Breaker

The **VARB** is a CFD modeled, custom fabricated device designed to break and diffuse particle ropes that form during transport. Once the rope is diffused, the material flows through the **Control Gate** which provides the ability to optimally balance or bias the flow as it enters the **Custom Splitter**. System piping is flange connected to the inlet of the **VARB** and outlet ports of the **Custom Splitter**. All components are alumina ceramic lined to maximize wear life in the most abrasive applications. Unlike rifles, perforated diffusers, or variable orifice valves, the **VARB and Control Gate** are designed to provide balanced flow with minimum permanent pressure loss. The **VARB and Control Gate** will typically generate less than one-tenth the pressure losses induced by other devices.

SFM™ for real-time, on-line measurement of relative, pipe-to-pipe mass flow of pneumatically conveyed, dry materials.



The SFM provides real-time relative flow and velocity data for materials measured by the static electric charge being carried by the particles.

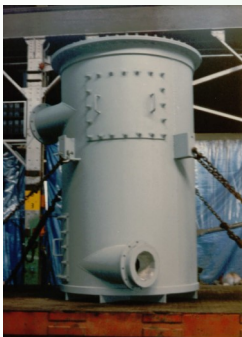
Unlike other technologies, the **sensors** are designed to handle abrasive materials with no probes inserted into the flow stream to erode and no “blind spots” in the measurement field. They are unaffected by changes in moisture and never require field calibration.



The field mounted **control cabinet** includes a user interface with custom graphics pre-loaded. Data can be stored locally or output via 4-20mA dc or Ethernet to your DCS or plant network.

Abrasion Resistant Components -

Since 1970 **CBP Engineering** has been manufacturing abrasion resistant pipe and fittings for Power and Industry. Our **Cast Basalt** and **Alumina Ceramic** lined products are manufactured to strict industry and quality control standards. With extensive experience in such diverse markets as Metals, Mining, Pulp and Paper, Power, and Municipal Wastewater, **CBP Engineering** is capable of providing cost effective solutions for your aggressive, abrasive pneumatic convey applications.



CBP Engineering

Cast Basalt Lined Pipe and Fittings

Alumina Ceramic Lined Pipe and Fittings

Silicon Carbide Linings and Components

Lined Chutes, Bins, Hoppers, Cyclones, Air Separator Tanks

Vacuum Bonded Ceramic Components

Screw Conveyors

Exhauster Fans

Whizzer Blades

Pulverizer Wear Plates

Orifice Plates

Dampers

Trowelable Wear Resistant Coatings

Site Services

Greenbank Energy Solutions

VARB Variable Area Rope Breaker

Control Gate Flow Biasing Valves

Pf Master Relative Mass Flow Measurement System

Mill Master Coal Particle Size Measurement System

G-Cam Carbon in Ash Measurement System

LA202 Boiler Tube Leak Detection System

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