

ACFM™

Primary Air and Pulverized Coal Flow Measurement System



BENEFITS

- Improved accuracy and repeatability of coal pipe data
- Lower personnel costs
- Eliminate drudgery of coal pipe testing
- Obtain more consistent coal fineness samples
- Greatly reduce operator influence on results
- Complete more testing, faster



**Airflow Sciences
Equipment**

Advanced Coal Flow Measurement System

The Advanced Coal Flow Measurement (ACFM) system measures the flow rate of primary air and pulverized coal in pneumatic transport pipes according to ASME PTC 4.2, or optionally to ISO 9931 standards. The system brings a state-of-the-art solution to the problem of performing reliable, efficient, and accurate flow measurements of primary air and coal flow.

ACFM SOFTWARE

Main Menu



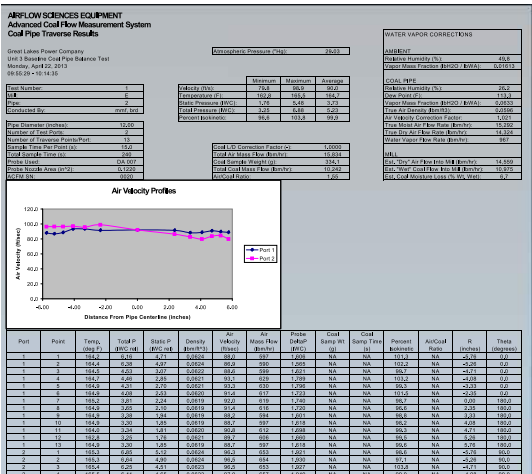
Test Setup Screen



Run Test Screen



Immediate Output of MS Excel® Test Report



THE ACFM MEASURES

- Primary Air Mass Flow Rate
- Primary Air Velocity Profile
- Primary Air Temperature
- Primary Air Static & Total Pressure
- Pulverized Coal Flow Rate
- Primary Air/Coal Ratio
- Atmospheric Pressure
- Obtains Coal Fineness Sample

Repeatable, Accurate Test Results

FEATURES

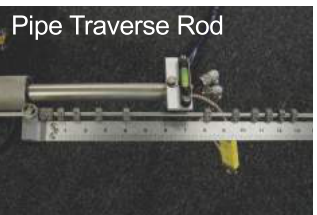
- Precision instrumentation and PC-based data acquisition performs all data recording and calculations
- Coal isokinetic extraction rate is automatically calculated from air flow measurement data and fully computer-controlled during test
- Advanced test port seal air system prevents the escape of coal dust and is computer controlled
- Color-keyed probe traversing system is simple, convenient, and precise
- Automatic probe purging system prevents probe pluggage and eliminates time consuming manual purging
- Generates complete test report in MS Excel at the completion of each test
- Cart holds probes, umbilical, and accessories for easy transport and storage
- Complete test can be performed using only the three button RF remote, operator simply moves the probe and pushes the button
- Cart fits into tight spaces and is easily carried up and down stairs
- Easily operated by a single person

SYSTEM INCLUDES

- Dirty air probe
- ASME or ASE coal sampling probe
- Traverse system
- 1000 coal sample bags

OPTIONS

- ISO 9931 (Swivel Sampler) probe
- Sample train humidity probe
- S-probe



Touch screen and remote allows single operator to perform test

SPECIFICATIONS

Interface	
Operating System	Windows®
User Interface	Keyboard, Touchscreen, Three Button RF Remote Controls (2)
Test Programs	ACFM Program, MS Excel
Documentation	ACFM™ Users Manual

Hardware	
Dimensions	20" W x 20" D x 52" H
Weight	95 Pounds
Environment	25°F to 135°F
Electrical Supply	100-120 VAC, 5A, 50/60 Hz, NEMA 5-15 Straight Blade
Electrical Enclosure	Powder Coated Steel, NEMA 12 (Dust Tight)
Compressed Air Supply	90 PSI, 25 CFM, Clean & Dry
Compressed Air Connection	Quick Disconnect x 1/2 FPT Fitting Supplied
Pipe Diameter	12" to 36" Standard, Extended Range Available
Sample Collection Filter Bag	99% Efficient @ 1 Micron
Test Ports Required	2 @ 90 Degrees Typical, 1.5" NPT or 2" NPT Nipple & Full Port Ball Valve Preferred

Instrumentation	
Primary Air Temperature	Type K Thermocouple, 32°F to 225°F, Accuracy +/- 2°F
Primary Air Static Pressure	+/- 30 IWC, Accuracy +/-0.05% FS
Primary Air Differential Pressure	+/- 25 IWC, Accuracy +/-0.05% FS
Primary Air Velocity	20 to 160 ft/sec
Atmospheric Pressure	17.7 to 30.54 IHg, Accuracy +/-0.25% FS
Sample Train Flow Meter	Pressure & Temperature Compensated, +/-2% FS Accuracy
Coal Sample Size	100g to 1500g Typical

Note: All instrumentation supplied with NIST traceable calibration

