

Real-Time Stack Particulate Measurements Using the TEOM

The tapered element oscillating microbalance (TEOM) technology is the solution for real-time, in-situ, EPA approved particulate matter testing applications:

- ◆ Real-time EPA Method 5 (front-half) and 17 stack testing
- ◆ Process characterization and tuning of PM control devices
- ◆ CAM planning to develop Opacity:Mass correlations
- ◆ Certification of PM CEMS according to USEPA Performance Specification 11
- ◆ ASTM Standard Test Method D6831-02
- ◆ ESP Model validation and/or calibration
- ◆ Measurement of low-PM concentration emission sources for compliance determinations
- ◆ Profiling start up and shutdown emissions



How It Works

The TEOM 7000 Source Particulate Monitor uses a tapered element oscillating microbalance (TEOM). With its collection filter and mass transducer located inside the stack, this allows for the isokinetic collection and direct mass measurements of particulate matter to be made on a real time basis. Sampling can be performed at a single-point or traversing multiple sampling points in multiple test ports.

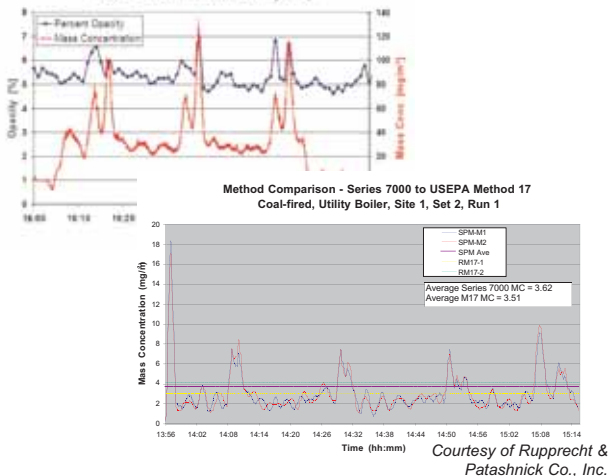
The TEOM 7000 includes the hardware and software support for performing on-line measurements of velocity, O₂ and CO₂ concentration and moisture adhering to USEPA Methods 1, 2, 3 and 4.

Advantages

- ◆ Performs real-time particulate measurements equivalent to EPA Methods 5 and 17
- ◆ Immediate results are generated at a high level of quality assurance
- ◆ Automatically adjusts to changes in source gas conditions, thus assuring high-quality mass concentration determinations
- ◆ A high level of data consistency is achieved through reduction of dependency upon individual operators



TEOM Series 7000 Source Part Monitor
Mass Concentration and Opacity



Regulatory Approval

- ◆ Conditional Test Method approval for USEPA Methods 17 and 5 (front half) at coal-fired combustion sources
- ◆ ASTM Standard Test Method D6831-02
- ◆ USEPA Approval for Wet Stacks
- ◆ TUEV-Rheinland equivalency to European Reference Method prEN 13284-1 (2000)
- ◆ British Standard BS EN 13284-1:2002
- ◆ CEN (Commission for European Norms) Standard EN 13284-2

For more information about how Clean Air Engineering can help you with your particulate testing needs, contact us at 800-632-1619.



Visit our website at www.cleanair.com to find out more about Clean Air Engineering's capabilities