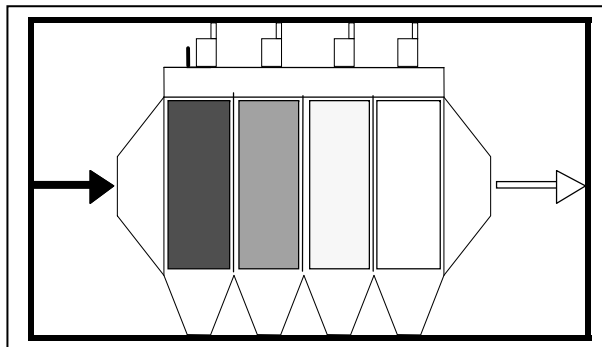


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# Three Day Practical Seminar

*on the*  
**Operation & Maintenance**

*Of*



# ELECTROSTATIC PRECIPITATORS

*conducted by*

**Thomas Keeler**

*being held in*

**Pittsburgh, PA**

**September 15 - 17, 2010**

## Features

- ESP Fundamentals Taught
- How Process Factors Affect Precipitation and How They Can be Used to Improve Performance
- How to Use Material Resistivity for Successful Precipitation
- Why Problems Exist and What to Look For to Attain Success
- How to Utilize Gas Conditioning
- How to Evaluate and Correct Gas Distribution in the Field
- How the Opacity Chart Can be Used as an Evaluation Tool
- Automatic Voltage Control Setup and Troubleshooting Tips
- What Voltage and Current Values Really Mean and Using Them to Evaluate Changes in the System
- How to Use Control Panel Meters, Observation Doors, and Other Methods for Helpful Evaluations
- How to Setup Rapper Programs for Varying Fuels and Process Conditions
- How to Inspect the Precipitator
- How Much Internal Damage Can be Tolerated
- What is Required to Minimize Component Failure
- Evaluate Individual Precipitator Problems With Attendees

## Scope of the 3 Day Operation & Maintenance Seminar

The main focus of the operation and maintenance seminar is to provide attendees with sufficient methods and information to better operate, maintain and improve the performance of existing precipitators, particularly those that are marginally sized and face a multitude of field problems. Mr. Keeler conducts this fundamental seminar on the practical aspects of the precipitator. He explains how to understand the underlying concepts to make the overall system perform best, how the process factors control the electrical readings and how to correct many of the maintenance problems that occur in the field. He discusses detailed procedures for internal inspections, gas distribution improvement methods and rapping concepts. This basic presentation is especially suited for hands-on personnel, plant engineers, and operation and maintenance supervisors.

## Attendees

Time will be allotted to evaluate and solve specific ESP problems brought in by the attendees. It is expected that the attendees will be able to apply concepts learned during the first two days of the seminar toward the solutions of these problems. Time to discuss specific problems privately with individual attendees is also scheduled for a 3 hour period during the evening of the second day.

The attendee is encouraged to bring in the following information on their installations:

1. At least two sets of ESP panel electrical readings with related process data and instantaneous opacity chart.
2. Ratings of the transformer-rectifier sets.
3. Precipitator layout and sizing.
4. Layout of inlet gas distribution system.
5. Areas of maintenance problems.

Please note that this request for information is only to enhance the worth of the seminar to those with specific problems. Generic problem data will also be supplied by the lecturers during the course of the seminar.

Precipitator Seminars  
PO Box 554  
Carlsile, Massachusetts 01741

## Registration and Fees:

Three Day Seminar.....\$1,125.00\*

Fee includes luncheons, course material and a copy of the book: "The Art of Electrostatic Precipitation" by J. Katz.

Room accommodations and meals not included in the program are the responsibility of the participants. However, a block of rooms are being held, so please contact the hotel directly and indicate that you will be attending the Precipitator Seminar. This block will be held up to two weeks prior to the seminar. Please call for details.

\* Multiple registration of employees from the same organization, and clients of TRK Engineering Services Inc., are eligible for a 10% discount.

## Operation & Maintenance Seminar

September 15 - 17, 2010  
Ramada Hotel &  
Conference Center-Greentree  
Pittsburgh, Pennsylvania  
Telephone: (412) 922-8100

Send registration and fee to:

**PRECIPITATOR SEMINARS**  
P.O. Box 554  
Carlisle, Massachusetts 01741

any questions call: (978) 287-0550  
fax: (978) 287-0569  
email: [trkeng@apcnetwork.com](mailto:trkeng@apcnetwork.com)

Managed by: TRK Engineering Services, Inc.

## Lecturer is:

**Thomas Keeler**

Tom is the president of TRK Engineering Services Inc. and EPSCO International, Inc., consulting service groups specializing in electrostatic precipitators and their application in numerous industrial settings. He is also manager of Precipitator Seminars, conducting nationwide seminars in electrostatic precipitators with associates Jacob Katz and Herbert J. Hall. Tom is an electrical engineer with over 28 years experience in the particulate removal field, including 5 years as a field service engineer for a precipitator manufacturer. He is an active member in several professional societies. Tom has been a panelist at several of the ESP/FF Round Table Forums and was a speaker at the 1994 & 1998 World Mining Exposition in Chile. Recently, TRK Engineering authored EPRI's new "Electrostatic Precipitator Maintenance Guide" under Tom's direction.

## Additional Seminars:

O&M Santiago, Chile November, 2010

## In-House Seminars:

Previous years have shown the need and value for companies to train a large number of personnel at their site. To accommodate that need, Precipitator Seminars offers In-House Seminars. Each seminar conducted at your location is designed to cover your specific installation.

A preliminary site visit is used to gather pertinent precipitator data. From this information, a two-day formal presentation is conducted, with problem areas emphasized and recommendations for their remedy offered.

Upwards of 20 to 25 attendees, including operation personnel, engineers, and hands-on precipitator personnel, can be handled in different ways to suit scheduling problems.

Information for this type of seminar service can be obtained by calling us at (978) 287-0550.

## Check Out Air Pollution Control Network

A website created by TRK Engineering Services to provide end users of air pollution control equipment with an unbiased source of information to support the purchase, understanding and effective use of their equipment. Listings include original equipment manufacturers, rebuild specialists, after-market product and auxiliary equipment suppliers, as well as consultants and professional organizations which support the industry. There is also a newsletter; technical papers and used equipment listings that are updated monthly. Visit us today at:

[www.apcnetwork.com](http://www.apcnetwork.com)

## EPSCO & TRK Engineering Joined Forces

EPSCO International, Inc. and TRK Engineering Services, Inc. joined forces back on January 1, 2007 to form an alliance that benefits both companies' clients. Our Clients' requirements now run the gamut - from studies, analyses, specifications and recommendations, to hands-on field inspections, technical direction of maintenance and construction and personnel training. The joint expertise of this alliance will allow both companies to provide a complete range of services for precipitators, fabric filters, gas conditioning, FGD systems, SCR's, and Mercury control, which for most companies is becoming a combined concern to be able to meet future environmental compliance levels. For information about services offered email:

Thomas Keeler: [trkeng@apcnetwork.com](mailto:trkeng@apcnetwork.com)

*Complete and detach*

Please reserve \_\_\_\_\_ place(s) for the Operation and Maintenance Seminar

Name(s) \_\_\_\_\_  
Organization \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Phone \_\_\_\_\_ Fax \_\_\_\_\_ Email \_\_\_\_\_

*Please make checks payable to PRECIPITATOR SEMINARS  
Mail to: 95 Clarks Farm Rd. Carlisle, MA 01741*