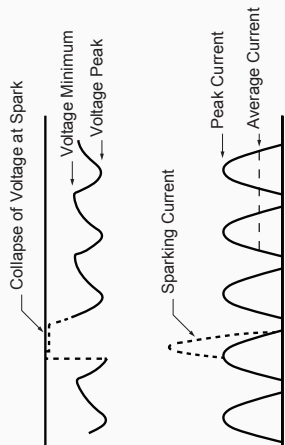
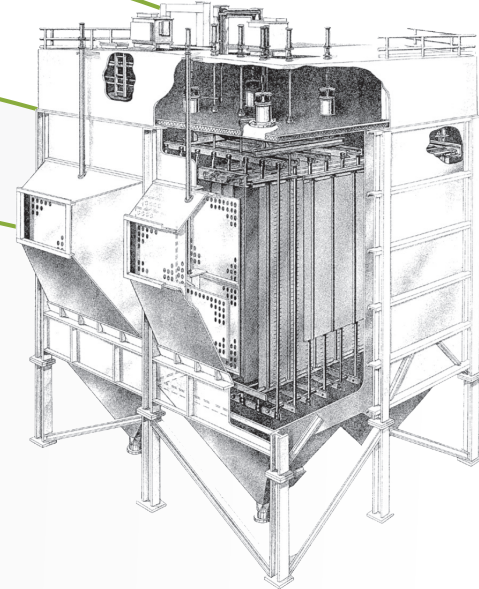


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## Three Day Practical Seminar

# OPERATION & MAINTENANCE

ELECTROSTATIC PRECIPITATORS



**CONDUCTED BY:** Thomas Keeler

**LOCATION:** Ft. Lauderdale, FL

**DATES:** September 14-16, 2011

## 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

The main focus of the seminar is to provide attendees with sufficient methods and information to better operate, maintain and improve the performance of 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 procedures for internal inspections, gas distribution 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. Attendees should be able to apply concepts learned during the first two days of the seminar to solve 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.

Attendees are encouraged to bring in the following information on their installations:

1. Two sets of ESP panel electrical readings with related process data and 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.

This request for information is only to enhance the worth of the seminar to those with specific problems. Generic problem data will be supplied.

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 are 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 14- 16, 2011  
Embassy Suites  
Ft. Lauderdale, FL  
Telephone: (954) 527-2700  
Reservation Call 1-800-EMBASSY

### SEND REGISTRATION AND FEE TO:

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

PHONE: (978) 287-0550

FAX: (978) 287-0569

EMAIL: [trkeng@apcnetwork.com](mailto:trkeng@apcnetwork.com)

MANAGED BY: TRK Engineering Services, Inc.

## 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.

Additional Seminars:

**O&M Santiago, Chile November, 2011**

## APC 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 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.

Visit us today at: [www.apcnetwork.com](http://www.apcnetwork.com)

## About the Lecturer

Thomas R. Keeler is the President of EPSCO International, Inc. and TRK Engineering Services Inc. These consulting service groups specialize in electrostatic precipitators and other air pollution control equipment. As manager and principle lecturer of Precipitator Seminars he conducts nationwide seminars on electrostatic precipitators. Tom is an electrical engineer with over 30 years experience in the particulate removal field including 5 years as a field service engineer for Environmental Elements Corporation, a major precipitator manufacturer. He is an active member in several professional societies and has also been a panelist at several of the ESP/FF Round Table Forums. Tom was the editor and one of the authors of the new FMAC EPRI "ESP Maintenance Guide" completed in December 2002. This manual will set the standards for ESP maintenance for many years to come.

## EPSCO & TRK Engineering

EPSCO International, Inc. and TRK Engineering Services, Inc. joined forces on January 1, 2007 to form an alliance that benefits both companies' clients. Our available services now include everything 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, SCRs, and Mercury control.

Contact Thomas Keeler for information about services offered.

EMAIL: [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