



Operating, Maintaining And Troubleshooting Dust Collection Systems

June 11-13, 2007
Mississauga, ON
Code: 98-0605-1809

Course Venue:
EPIC Learning Center
5759 Coopers Avenue
Mississauga, ON L4Z 1R9
Tel: (905) 361-1901



You may register online
by completing our
online form at:
[http://www.epic-
edu.com](http://www.epic-
edu.com)



If you have any
questions, or require
assistance,
phone: 1-888-374-2338
ext. 222



You may fax the
completed form to:
1-800-866-6343
(24 hours)



Our mailing address is:
Epic Educational Program
Innovations Center
5759 Coopers Avenue
Mississauga, ON L4Z 1R9



You may e-mail the
completed form
attention to: Ruby
register@epic-edu.com



CONTINUING EDUCATION UNITS AWARDED

LEARNING OUTCOMES:

- manage and optimize a dust collection system for a maximum efficiency at lowest cost,
- prepare and implement a preventive maintenance program,
- plan, control and implement a system upgrading avoiding costly errors from wrong modifications of a dust collection system,
- recognize and prevent the fire and explosion dangers of a dust control system.
- use complex concepts of air pollution control systems, the performance parameters and the interaction with systems design and operation,
- apply practical new solutions in specifying, operating and maintaining a dust collection system,
- be familiar with required performance of the various components of a dust collection system and equipment,
- examine many possibilities of maximizing efficiency and economical performance of your dust collection systems,
- comply with the codes and regulations governing the air pollution control at a work place.

DESCRIPTION

Dust is a hazard for industries which requires special skills to the course focuses on providing the basics for specifying, operating and maintaining dust collection systems for industrial production processes. It covers the fundamental knowledge pertaining to indoor air quality, industrial air pollutants as well as applicable codes and regulations. A presentation of the principles of local exhaust systems operations is followed by a hands-on session for dissecting and troubleshooting a dust collection system. The course provides participants with the knowledge required for the successful operation and maintenance of a dust collection system.

OBJECTIVE

To provide participants with a better understanding of industrial dust collection systems and develop their skills in the operation, maintenance and troubleshooting of these systems.

WHO SHOULD ATTEND

Mechanical design, operation and maintenance personnel in industrial plants who are responsible for dust collection for industrial production processes. Also, this course will benefit contractors who install or refurbish such systems.

FACULTY

Oleg Kenchin, PhD, P.Eng., Senior Consultant, Mechanical Engineering has over 25 years experience as a Mechanical Engineer. He has graduated with a Doctor of Philosophy degree from the State Technical University of St-Petersburg in Russia. The Diploma is considered by the University of Toronto in level to the standard PhD degree from a reputable Canadian university. During his career Dr. Kenchin has been primarily involved in research and development, designing, installations, evaluation, troubleshooting and commissioning of all types of industrial, commercial and institutional HVAC and Air Pollution Control systems and equipment. Additionally, he has been a lecturer at Engineering Professional Advancement Courses teaching several mechanical engineering subjects. Three patents, over eighteen books and articles have been published by Dr. Kenchin in the technical literature in Europe and North America.

In-house Training

This course is also available as an in-house program at your company's premises. For more information please call Lillian Musura at 1-888-374-2338 ext. 242 or e-mail her at lmusura@epic-edu.com.

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Operating, Maintaining And Troubleshooting Dust Collection Systems

PROGRAM OUTLINE

Faculty: Oleg Kenchin, PhD., P.Eng.

Day I

Dust Collection system

Air Pollutants (1 hr)

- Poisoning and flammable gases
- Particles and its classification
- Mist, vapor and heat
- Explosivity

Codes and Regulations (45 minutes)

- OSHA and Regulations for Industrial Establishments
- The Fire Code and NFPA
- American Conference of Governmental Industrial Hygienists (ACGIH)
- Environmental Protection Act (EPA)

Local Exhaust system components

(45 minutes)

- Capturing devices (hoods, enclosures, side-drafts, etc.)
- Ducts and airflow throttling devices
- Dust Collectors
- Fans and stacks

Basic Performance parameters of a Local Exhaust system (1.5 hrs)

- Capturing velocity
- Conveying velocity
- System Pressure

Workshop – exercises in determining proper performance parameters of an air exhaust system (2 hrs)

- Case #1
- Case #2
- Case #3

Adjournment

Day II Fabric Duct Collector

Types of Fabric Dust Collectors operations

(45 minutes)

- Reverse airflow (low pressure)
- Shaker
- Reverse pulse (high pressure)

Filtration media (45 minutes)

- Filtration mechanisms
- Permeability of the media and “air to cloth ratio”
- Characteristics of Filter Fabrics
- Fabric and pleated bags
- Cartridge filters

Key performance parameters of Fabric Dust Collectors (1.5 hrs)

- Reverse airflow (low pressure)
- Shaker
- Reverse pulse (high pressure)

Prevention of Fire and Dust Explosions of a dust collector (1 hr)

- National Fire Protection Association (NFPA) Standards

- Combustible Dust Explosions (Knowing your dust)
- Prevention/Protection Strategy

Workshop – exercises in determining proper performance parameters of a Dust Collector (2 hr)

- Case #1
- Case #2
- Case #3

Adjournment

Day III Troubleshooting of an Exhaust System and a Dust Collector

Causes of malfunctioning of an exhaust system (0.5 hr)

- Symptoms of malfunctioning
- Design problems
- Maintenance problems
- Change in production process

Dissecting and troubleshooting an exhaust system (1 hr)

- Measurements and observation
- Interpretation of the measurement results
- Troubleshooting chart

Workshop – exercises in troubleshooting an exhaust system (1.5 hrs)

- Case #1
- Case #2
- Case #3

Causes of malfunctioning of a Dust Collector (0.5 hr)

- Symptoms of malfunctioning
- Design problems
- Maintenance problems
- Change in production process

Dissecting and troubleshooting a Dust Collector (1 hr)

- Measurements and observation
- Interpretation of the measurement results
- Troubleshooting chart

Workshop – exercises in troubleshooting a Dust Collector (1.5 hrs)

- Case #1
- Case #2
- Case #3

Closing Comments and Final Adjournment

2.1 CEUs/21 PDHs

There will be a one-hour lunch break each day in addition to a refreshment and networking break during each morning and afternoon session.

Daily Schedule

8:00 Registration and Coffee (1st day only)
8:30 Session begins
4:30 Adjournment

Registration Form

ATTENDEE(S): Please list additional names on separate copies made from this registration form.

Mr/Mrs/Ms _____

Position _____

Company/Organization _____

Nature of Business _____

Address _____

City _____ Province _____

Postal Code _____

Tel. _____ Res. _____

Fax _____

E-mail _____ @ _____

Please provide both business and residence telephone numbers in case of changes.

YES, I would like to receive notification of upcoming courses by E-mail?

TAX INFORMATION:

If you are tax-exempt, enter your tax-exempt number in the space below, and attach a copy of your tax-exempt certificate. Questions? Phone us Toll Free at (888) 374-2338 ext. 222.

GST# R135 276 467 Exempt# _____

PAYMENT METHOD: (*Payment must be received before the seminar/course start date.*)

Tuition (Canadian funds): \$ _____

Plus GST or HST: \$ _____

Total amount due: \$ _____

Cheque# _____

(Payable to EPIC Educational Program Innovations Center)

Purchase order # _____

Purchase orders must be received in advance of the course

Accounts Payable personnel:

Tel.: _____

Charge to: MC VISA

AMEX DINERS CLUB

Card Number: _____

EXP. Date: _____

Authorized Signature

FEE: The fee for this course is \$1,695 + GST. If you register less than 21 days before the start date, the fee increases to \$1,895 + GST.

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