64TH ANNUAL

MICHIGAN IVC

INDUSTRIAL VENTILATION CONFERENCE

www.michiganIVC.org

3315 S. Pennsylvania Ave.
Lansing, MI 48910

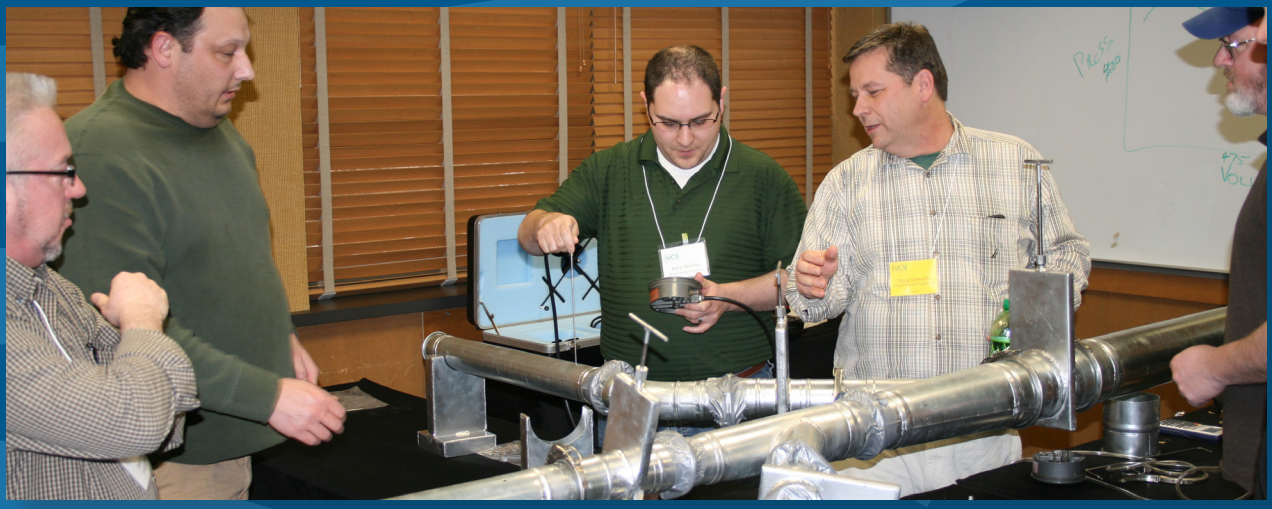
Presort Standard
U.S. Postage
PAID
Permit #975
Lansing, MI

- Four days of advanced training
- Two optional workshops
  Troubleshooting • Combustible Dust

February 9-13, 2015

Kellogg Hotel & Conference Center
Michigan State University, East Lansing, Michigan

Industrial ventilation experts from across the U.S. and Canada will provide instruction and lectures on the design, construction, use, and testing of ventilation systems. The conference offers an introductory and two advanced design courses, a Managing Industrial Ventilation Systems course, and two optional workshops.



"Structured very well. Doing lectures and classroom intermittently helps tremendously with staying focused."

Register today at www.michiganIVC.org or call **(517) 204-3687.**

Industrial Ventilation System Design Course Descriptions

Participants will receive a copy of the ACGIH® publication, *Industrial Ventilation: A Manual of Recommended Practice for Design, 28th edition.* The design courses offer more than 20 hours of classroom instruction addressing the application of industrial ventilation system design principles. The following seminars, some of which are concurrent, are offered to design course participants:

- Principles of Air Movement
- Principles of Hood Design
- Principles of Duct Design and Construction
- Industrial Ventilation System Installation Costs
- Fan Selection
- Fan System Effects
- Fan Installation, Operation and Maintenance
- Workplace Exposure Assessments
- Mechanical Collection and Baghouses
- Recirculation of Exhaust Air
- Applied Industrial Ventilation
- Scrubbers, ESPs and Other Cleaners
- Stack Design
- Ventilating Combustible Dusts
- Ventilation System Testing Lab

"Enjoyed my time — money well spent."

Three design courses are offered:

PHASE I • Introductory Ventilation System Design

This class is intended for participants who have responsibilities for ventilation system maintenance or oversight of ventilation system projects. Participants who have had limited prior experience or specific education in ventilation system design or who do not design ventilation systems regularly are also recommended to attend this class.

PHASE II • Advanced Ventilation System Design

Participants selecting this class should be thoroughly familiar with exhaust system design procedures or have satisfactorily completed a Phase I Ventilation System Design class at a prior conference. While not required, all Phase II registrants are encouraged to bring a computer.

Non-Standard Air Applications

This class will deal with exhaust systems that involve elevated air temperatures and/or moisture where air density may vary significantly from standard conditions.

Visit **michiganIVC.org** for the complete class schedule or call **(517) 449-9443** for more information regarding our courses.

Managing Industrial Ventilation Systems Course

This course has been designed for participants that have management oversight of existing industrial ventilation systems. It has been designed to follow along with ACGIH's, *Industrial Ventilation: A Manual of Recommended Practice for Operations and Maintenance* (which will be provided to course participants).

The course contains a combination of classroom lectures and associated hands-on lab exercises. Topics to be covered in this course include:

- Hood flow principles and measurement
- Measuring duct static and velocity pressures (SP and VP) and determining volumetric flow rate (Q)
- Measuring fan static pressure (SP), velocity pressure (VP), volumetric flow rate (Q), speed (RPM) and amperage
- Building fan curves
- Changing the system volumetric flow rate by changing fan speed
- Adding a hood to an existing ventilation system
- Monitoring system performance with pressure measurements
- Balancing systems by adjusting dampers
- Gathering baseline data about an existing system
- Proof of performance system testing
- Using deviations in baseline data to diagnose problems
- Troubleshooting and analysis of underperforming ventilation systems

Attendance in this course is limited to a maximum of 20 participants, so register now!

Optional Workshops

Two optional workshops will be offered on Friday, February 13, 2015, from 8 AM to 3 PM. Participants need not attend a four-day class to attend either of the workshops. Participants of the four-day Managing Industrial Ventilation Systems course should not register for the *Industrial Ventilation System Troubleshooting* workshop. The workshops are:

Industrial Ventilation System Troubleshooting

This workshop is devoted to procedures for troubleshooting common system problems by using the static pressure method. Topics addressed include • System Maintenance and Scheduling, Technical Documentation and Base-line at System Start-up • System Static Pressure Method for Troubleshooting • Troubleshooting Applications • Baghouse and Fan Troubleshooting

Combustible Dusts

This subject remains a hot topic as industry works to protect its employees from the potential for catastrophic deflagrations and explosions and federal OSHA works to implement a combustible dust standard. Taught by experts in combustible dust applications, this workshop is designed to address the following topics: • What OSHA Looks for on Combustible Dust Inspections • Risk Assessments and Process Hazard Analysis • Dust Collector Requirements • Explosion Prevention and Protection Systems

Review Classes

Two review classes are being offered at 5:15 on Monday night — **Basic Design and Math Concepts** and **Psychrometrics**. The basic design and math concepts review will help students with the calculations relevant to industrial ventilation design. The psychrometric review discusses how to use a psychrometric chart and defines the terms used on the chart such as dry-bulb, wet-bulb and dew point temperatures, density factor, humid volume, etc.

Self-Placement Questionnaire

Registrants should pick the class session that best fits their ability, past experience and goals regarding ventilation system design or operations and maintenance. To make a selection, participants are encouraged to complete the Self-Placement Questionnaire located on our website.

Why Attend This Conference

• Low student-to-instructor ratios providing participants with the greatest opportunity for successfully learning the presented material • Receive maintenance points for industrial hygiene and potentially professional engineering certification • Receive reference materials pertinent to industrial ventilation system design, management and troubleshooting.

Who Should Attend

• Plant Engineers and Managers • Facilities Managers • Risk Managers • Sheet Metal and Mechanical Contractors • Consulting Engineers • Industrial Hygienists • Anyone involved in overseeing industrial ventilation system design, installation, operation and maintenance.

Conference Staff

Air Systems Corporation
- Jonathan Hale

AirMetrics
- Mike Meyer

AMEC
- Jim Friedman

American Air Filter International
- Jason Guleda • Dan Josephs (retired)

Donaldson Company
- Kirt Boston • Tim Elsner
- Tom Godbey (retired)
- Christy Klocker

Doug Edwards Engineering LLC
- Doug Edwards

Fike Corporation
- Bob Tedquist

General Motors Corporation
- Graham Parr
- Cindy Penabaker

Industrial Air Solutions Inc.
- Tim Theeuwes

Johns Manville
- Mike Folk

KBD Technic
- Rob Coleman • Bob Shearer

Kirk and Blum
- Dale Tompkins

Knutson Ventilation Inc.
- Gerhard Knutson

Lewellyn Technologies
- Jason Reason

Miller Electric Manufacturing Company
- Brian Hammers

MIOSHA
- Eric Allen • Nella Davis-Ray
- Bob Dayringer • Gregg Grubb
- Jeremy Kapalla • Greg Kozak
- Bill Lykes

The New York Blower Company
- Greg Whittington

Novelis Corporation
- Greg Hembree

SynTerra
- Marty Schloss

Schust Engineering
- Ray Tedford

TRC
- Leo Tramm

Twin City Fan Companies LTD
- Jon Weeks

Walli Environmental Technologies Inc.
- Richard Walli

Private Consultant
- Bob Allen

MIOSHA
Michigan Occupational Safety and Health Administration

All meetings are accessible and barrier free. Please contact Suzy Carter at least two weeks in advance, to request necessary accommodations. The meeting site and parking is accessible. In order to enhance accessibility for everyone, individuals attending the meeting are requested to refrain from using heavily scented personal care products. People with disabilities requiring additional services (such as materials in alternative format) in order to participate in the meeting should call 517-204-3687. The Michigan Department of Licensing and Regulatory Affairs (LARA) is an equal opportunity employer/program.

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Three ways to register

1. **On-line**
   www.michiganIVC.org

2. **By Phone**
   (517) 204-3687

3. **By E-mail:**
   Download registration form from our website, complete, scan and e-mail to info@michiganivc.org

Four-Day Conference Course Fee

Monday through Thursday: $1095
Sunday evening banquet
Lunch and refreshments included

Optional Workshop Fee

Friday, February 13, 2015

Troubleshooting of Industrial Ventilation Systems: $249

Combustible Dusts: $249
Lunch and refreshments included

Group Rate Discount

10% discount on all offerings for three or more people from the same company. Call for details.

Conference Information

(517) 339-1247

Kellogg Center
(800) 875-5090

Registration Information

Registration form available at www.MichiganIVC.org

CANCELLATION POLICY

An administrative fee of $25 per person will be charged for refund requests received in writing by January 8, 2015. An administrative fee of $200 per person will be charged for requests received after January 8, 2015. No-shows will not receive a refund. However, you may send a substitute participant. In the unlikely event of cancellation by the sponsors, liability to the participants is limited to the refund of the registration fee.

ON-SITE REGISTRATION

Registration hours at Kellogg Center are 5:00 p.m. to 7:00 p.m. on Sunday, February 8, 2015. The registration desk will also be open Monday from 7:00 a.m to 8:30 a.m. For registration information, call (517) 204-3687.

FEE

The fee includes a conference banquet on Sunday evening, all course supplies, refreshments during breaks, and lunches on Monday through Thursday. The additional fee for the Friday workshop includes the workshop materials, refreshments, and lunch. Full payment should be made payable in U.S. funds to Michigan Safety Consortium. Since class sizes are limited, early registration is suggested.

LOCATION

The conference will be held at the Kellogg Hotel & Conference Center, Michigan State University, East Lansing, Michigan. It is readily accessible from all expressways via US-127 or 1-496. Travelers should take Exit 9 onto Trowbridge Road, turn left on Harrison Road, and travel north 3/4 of a mile to the parking ramp adjacent to the center. Free bus transportation will be available between Lansing's Capital City Airport and the Kellogg Center on Sunday through Friday from 7:00 a.m. to 10:30 p.m.

CERTIFICATION CREDITS

Certified Industrial Hygienists (CIHs) can receive certification maintenance for all conference offerings from the American Board of Industrial Hygiene. **Professional Engineers** may also receive certification maintenance points, though they must check with their local professional engineering organization.

A block of rooms has been reserved at the Kellogg Center. Standard single occupancy is $100. Shared occupancy is $50 per person.
Call (800) 875-5090 to make reservations.

Requests must be received by January 8, 2015 to guarantee housing priority at the Kellogg Center. If a shared room is requested, please indicate choice of roommate. Kellogg Center reservations will not be held past 6:00 p.m. unless a guarantee or advance payment is made. Because Kellogg Center housing is limited, reservations are available on a first-come, first-served basis until rooms are filled.
Maps and further details will be provided in a registration confirmation letter.