



2012

Ventilation Planning & Design Workshop
(introductory and advanced)



1625 Shaw Ave. Suite 103 Clovis, CA 93611 USA

Mine Ventilation Services, Inc.

March 28-30, 2012

Mine Ventilation Planning & Design Workshops

Mine Ventilation Services, Inc. (MVS) is pleased announce the release of VnetPC Pro and is offering introductory and advanced workshops between March 28-30, 2012 at Tenaya Lodge at Yosemite. The resort is an hour drive from Fresno in the Sierra Nevada Mountains and is close to the southern entrance to Yosemite National Park.

MVS believes that ventilation planning is only understood if the fundamentals of the science of ventilation are understood. To this end, the first day of both workshops are devoted to the fundamentals of ventilation, thermodynamics, fan selection, and other parameters essential to the understanding of mine ventilation. Because the course is offered as an inclusive approach to mine ventilation practice, users can use the course certificate for professional engineering continuing education credit.

The new program has significant upgrades including:

1. Scroll Wheel Zoom and Pan
2. Branch Templates
3. Fan Import from DuctSIM
4. Expanded Toolbars
5. Shock Loss Calculator
6. Transient Time Calculator
7. Dual Parameter Display
8. Fans and Fan Curve(s) Adjustments with Air Density and VFD Settings
9. Multiple Branch Editing
10. Isometric (3D) Editing Capabilities
11. Improved DXF Importation Features
12. New Visualizer Package to Present Results

In addition, the program is capable of integrating with the MVS program MineFire for the prediction of fumes and temperature through a mine during a fire event.

The courses will be taught by Mr. Keith G. Wallace, Jr. and Mr. Brian Prosser, P.E. of MVS. Mr. Wallace holds a Bachelor and Master's Degree in Mining Engineering from the University of California at Berkeley. He has been involved in the design of mine ventilation systems for over 25 years and is a past Chairman of the Underground Ventilation Committee of the Society of Mining Engineers. Mr. Prosser holds a Bachelor degree from Virginia Polytechnic Institute and State University. He has worked in the field of subsurface environmental engineering for more than 15 years. Each of the instructors has extensive experience in ventilation design for metal, non-metal, and coal mining operations throughout the world.

Objectives

The main objectives of the introductory courses are:

1. provide an outline of the elements of modern thinking involved in the planning, design and control of mine ventilation circuits,
2. provide an update on the theory and methodologies underlying the various aspects of ventilation planning,
3. provide "hands-on" training on the application of the VnetPC Pro ventilation network simulation program.
4. provide an introduction to fire simulation modeling using the MineFire program.

The course will also discuss new technologies in ventilation monitoring and control systems. It is hoped that the participants will leave the course enhanced in their ability to obtain the data required for quantitative ventilation planning, and the skill to engage in practical design procedures through ventilation network simulations.

Methodology

The course will emphasize the use of the VnetPC Pro ventilation network simulator. The course will discuss the basic theory of ventilation planning and survey techniques in order for participants to understand the importance of the data that is input to the program. A "hands-on" example will be incorporated in the course. All course attendees will be encouraged to participate in the example ventilation problem.

The advanced course is designed for participants with software planning experience. It is advised that course participants have taken an introductory course and have had some time to work in ventilation planning and design.

Outline of Basic Ventilation Planning Course

Day 1 - Review of Basic Theory

- Introduction to Ventilation Planning
- Basic Laws of Incompressible Flow
- Airway Resistance
- Factors Which Affect Airway Resistance
- Ventilation Economics
- Fan Theory
- Introduction to Mine Ventilation Thermodynamics
- Ventilation Surveys
- Reduction of Field Data from Ventilation Surveys

Day 2 - Introduction to VnetPC Pro and Development of Basic Model

- Demonstration of the use and capabilities of the VnetPC Pro network simulation program
- Program Structure
- Introduction to Ventilation Simulation Problem

VnetPC Pro Sample Problem

Participants will divide into groups of 2 to 3 and work on a sample ventilation problem.

- Ventilation Survey Data of Sample Mine
- Data Input
- Correlation Exercise

Day 3 - Advanced Application of VnetPC Pro and Introduction to MineFire

- Future Mine Ventilation Design
- Optimization of System
- Fan Selection (location and duty)
- Cost Exercises
- Introduction to MineFire program

Outline of Advanced Ventilation Planning Course

Day 1 - Review of Basic Theory and Introduction to VnetPC Pro

- Introduction to Ventilation Planning and Short Review of Ventilation Principles
- Detailed Measurement Techniques to Obtain Data for Computer Simulations
- Example Reduction of Field Data from Ventilation Surveys
- Review of Program Features (including new features with fan input and conversion routines)

Day 2 Advanced Application of VnetPC Pro

- Progressing From Established Basic Models to Develop Alternative Ventilation Scenarios
- Optimization of Models
- Developing Operating against Capital Cost for Alternatives.
- Preparing Reports on Alternatives
- Selecting Options

Day 3 - Advanced Application of VnetPC Pro (continued)

- Selecting Ventilation Infrastructure (doors, regulators, etc.)
- Fan Selection
- Preparing Specifications for Fans
- Using VnetPC Pro with Mine Fire Simulations
- Open Session to Discuss Modeling Features with Course Participants

Cost of each Three-Day Course

The cost of the course includes the following:

- Handouts of course material
- Lunch each day of the course
- Hosted dinner on the second evening of the course

Cost of Course: US \$1,500.00

This does not include hotel accommodations or transportation. Please call the resort directly to book your room and receive the discounted rate of US \$125.00/night. Please let them know that you are with Mine Ventilation Services, Inc. in order to receive the group rate.

You may contact Tenaya Lodge to make reservations at 1122 Highway 41, Fish Camp, CA 93623, (877) 635-5807 or www.tenayalodge.com and enter the group code **3006IW**.

To reserve a space for the Beginning/Advance Short Course on March 28-30, 2011, complete this form and mail or fax this order form. **Please do not email this form.**

	Mine Ventilation Services, Inc. 1625 Shaw Ave., Suite 103 Clovis, California 93611 Phone: 559.452.0182 Fax: 559.452.0184
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Please check the appropriate box and include the number of attendees.

Beginner	<input type="checkbox"/>	Person (s)	<input type="checkbox"/>	Type of Mine: _____
Advanced	<input type="checkbox"/>	Person (s)	<input type="checkbox"/>	(Metal/Non-metal or Coal)

If you plan on using your own personal laptop computer for the course please indicate below:

Attendee is bringing personal laptop PC Attendee will use MVS provided PC

I hereby authorize MVS, Inc. to bill my credit card for full payment of USD \$1,500.00/person.



Credit Card Number: _____ Expiration Date: _____

Print Name on Credit Card: _____

Name of Company : _____

Cardholder's Phone Number: _____ Fax No. _____

Company's Name: _____

Credit Card Billing Address: _____

City, State, Zip code: _____

Name of Person (s) Attending: _____

Email Address _____

Total Amount U.S. \$ _____

Signature of Card Holder: _____ **Date:** _____

About Mine Ventilation Services, Inc.

Mine Ventilation Services, Inc. was formed in 1983 in response to a growing demand for engineering consulting expertise in the design, planning and control of underground environments. The company is currently headquartered in Clovis, California. Led by Keith G. Wallace, Jr., the company has an additional staff of eight full-time engineers and can call on the services of other qualified engineers and staff as necessary. MVS has operated a full laboratory for the analyses of Diesel Particulate Matter (DPM) in accordance with the NIOSH 5040 Method since January of 2002. Sample collection and analyses, baseline studies, and optimization strategies for the measurement and control of DPM provided by MVS are available in the U.S. and abroad. MVS also maintains and calibrates a complete suite of instrumentation and ancillary equipment for performing underground ventilation surveys.

The majority of MVS' simulation analyses are performed in-house with its own equipment and various MVS software such as VnetPC, MineFire, ClimSim for Windows, GASSIM and AIRSIZE.



Questions?

If you have any questions about ventilation training or software, or if you simply desire additional information regarding MVS and their capabilities in the field of sub-surface environmental engineering and design, please contact us using one of the options provided below.



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