



Hazardous Locations Seminar

Seminar dates/locations:

Norwood, MA, USA

December 5-6, 2011

Four Points Sheraton

1125 Boston-Providence Turnpike

Norwood, MA 02062

San Diego, CA, USA

February 23-24, 2012

Embassy Suites

San Diego Bay – Downtown

601 Pacific Highway

San Diego, CA 92101

Norwood, MA, USA

December 10-11, 2012

Four Points by Sheraton Norwood

1125 Boston-Providence Turnpike

Norwood, MA 02062

They don't call them "hazardous" for nothing! This information-packed, two-day seminar is an eye-opening opportunity for you to learn more about employing electrical equipment in hazardous locations.

If you design, install or operate electrical equipment in hazardous locations, this seminar is for you!

Learn to minimize the risk of ignition as you focus on designing and building safer equipment and installations that conform to applicable regulations.

You will learn:

- How and why hazardous locations are classified
- Protection techniques for classes, divisions and zones worldwide
- National Electrical Code® (NEC®) classifications of combustible dust; ignitable fiber; and flammable gas, liquid and vapor
- Which standards meet your certification needs
- Construction and performance requirements based on protection techniques
- Wiring methods and other installation concerns covered by the NEC®
- How to obtain the certification your products need for access to global markets
- How to cut costs and reduce risk of loss by taking advantage of new protection methods

Registration fee:

US\$695 per person; FM Approvals and FM Global clients: **US\$595**, save *US\$100*.

Day 1: 7:30 a.m. – 5 p.m., Day 2: 7:45 a.m. – 3 p.m.

Includes refreshment breaks, lunch and valuable seminar material.



Hazardous Locations Seminar

Please register me for:

- Norwood, MA, USA
December 5-6, 2011
- San Diego, CA, USA
February 23-24, 2012
- Norwood, MA, USA
December 10-11, 2012

To Register:

Fax registration sheet
to FM Approvals

Finance Department:

+1 (1)401 464 4575

or

Call FM Approvals

Finance Department

+1 (1)800 972 8730

(toll-free in Canada and

the United States only)

or +1 (1)401 415 2991

(for international customers)

or

Mail a copy of registration

sheet with your payment to:

FM Approvals LLC

75 Remittance Drive Suite 6181

Chicago, IL 60675-6181 USA

Please reserve space for the following individuals in the *Hazardous Locations* Seminar.

I have enclosed/will send the registration fee of US\$695 (US\$595 for FM Approvals or FM Global clients) before the seminar.

Seminar location: _____ Seminar date: _____

Name 1: _____

Title: _____

Name 2: _____

Title: _____

Company: _____

Street/P.O. box: _____

City: _____

State/province: _____ ZIP/postal code: _____

Telephone: _____ Fax: _____

Email address: _____

Visa, MasterCard and American Express accepted. Credit card no.: _____

Exp. date: _____

Name on credit card: _____

For even faster confirmation, please indicate your FM Global account, index no.,
or FM Approvals customer number (if applicable): _____

Confirmation will be emailed.

Seminar fee includes complete set of reference material, refreshment breaks and lunch.

Attendees are responsible for their own accommodations. See hotel information on back for more details. Be sure to mention FM Approvals when making reservations.

Cancellation policy: A minimum of eight (8) people is needed to hold this seminar. Registrants will be notified 14 days prior to the seminar if cancellation is necessary. Cancellation with full refund can be made up to 14 days prior to the seminar; however, refunds will not be given to those who do not attend.



Member of the FM Global Group

This two-day hazardous locations seminar includes a variety of topics, such as:

- U.S. government requirements for electrical installations and equipment
- NEC® Articles 500 – 506
- Area classification of areas with flammable gas and vapor
- Area classification of areas with combustible dust
- Explosionproof (Division 1) and flameproof “d” apparatus
- Installation of explosionproof and flameproof apparatus
- Intrinsic safety (Division 1) and intrinsic safety “i” apparatus
- Installation of intrinsically safe apparatus
- Purged and pressurized (Division 1 and Zone 1) apparatus
- Class II and Class III Apparatus
- Enclosures for Electrical Equipment
- Class I, Division 2 and Zone 2 “n” apparatus
- Installation of Class I, Division 2 and Zone 2 apparatus
- Increased safety “e” apparatus
- Encapsulation “m” apparatus
- Powder filling “q” apparatus
- Oil Immersion “o” apparatus
- Electrical trace heating
- Combustible gas detectors
- Changes in the 2011 NEC®
- European Union requirements (ATEX)
- Category 1 (Equipment Protection Level Ga) apparatus
- FM Approvals process
- IECEx Equipment Certification Scheme
- Overview of FM Approvals

Speakers:

William G. Lawrence, P.E.

Bill Lawrence is principal engineer for the hazardous location group of FM Approvals. Bill has been with FM Approvals for more than 25 years, and is involved with the examination and testing of electrical equipment rated for use in hazardous (classified) locations. Before joining FM Approvals, he was employed by a test instrument manufacturer where he also worked in product safety. He received his bachelor's of science degree in electrical engineering from Pennsylvania State University and is a registered professional engineer in the Commonwealth of Massachusetts. He currently serves on various National Fire Protection Association (NFPA), Instrumentation Systems and Automation Society (ISA), and International Electrotechnical Commission (IEC) committees for hazardous location electrical equipment, including vice-chair of ISA12 and as the U.S. technical advisor to IEC TC31.

Jay N. Pungitore, Senior Engineering Specialist

Jay Pungitore is a senior engineer with the electrical group of FM Approvals. Jay has been with FM Approvals for 13 years and is primarily involved with the examination and testing of intrinsically safe and nonincendive electrical equipment for use in hazardous (classified) locations. Prior to joining FM Approvals, Jay was employed as a field service engineer where he was responsible for the start up or troubleshooting of industrial electromechanical weighing equipment for various processes throughout North America. Jay received his Bachelor's of Science degree in electrical engineering technology from Wentworth Institute of Technology in Boston, MA.

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Josephine Mahnken
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062 USA

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Speakers continued

Stephen P. Henney, Advanced Engineer

Steve Henney is an advanced engineer with the electrical group of FM Approvals. Steve has been with FM Approvals for eight years and is largely involved with the examination and testing of combustible gas detection equipment rated for use in hazardous (classified) locations. Prior to joining FM Approvals, Steve was employed as a mechanical design engineer working on process gas analyzers and an application engineer designing gas monitoring systems installed world wide. Steve received his Bachelor's of Science degree in mechanical engineering from the University of Maryland and is a member of the ISA12.13 committee, Performance Requirements & Recommended Practice for Combustible Gas Detectors.

Hotel Accommodations

Norwood, MA, USA

December 5-6, 2011

Courtyard Marriott
of Norwood
300 River Ridge Drive
Norwood, MA 02062

Tel: + (1)781 762 4700

Room rate: US\$109

Must be booked 30 days in advance to receive this rate.

Complimentary transportation between hotel and seminar location will be provided.

San Diego, CA, USA

February 23-24, 2012

Embassy Suites
San Diego Bay – Downtown
601 Pacific Highway
San Diego, CA 92101

Tel: + (1)619 239 2400

Room rate: US\$199

Must be booked 30 days in advance to receive this rate.

Norwood, MA, USA

December 10-11, 2012

Four Points by
Sheraton Norwood
1125 Boston-Providence
Turnpike
Norwood, MA 02062

Tel: + (1)781 769 7900

Room rate: US\$135

Must be booked 30 days in advance to receive this rate.

For more information:

Contact **Josephine Mahnken**

Senior Process Specialist

FM Approvals

at +1 (1)781 255 4813

or

by email at

josephine.mahnken@

fmaprovals.com