

Webinar Information

Schedule

Log into Webinar 7:30 - 8:00 am PDT	Break 11:30 am - 12:10 pm PDT
Morning Session 8:00 am - 11:30 am PDT	Afternoon Session 12:10 - 3:30 pm PDT

Tuition

\$319 for individual registration
\$289 for two or more registrants from the same company at the same time.
Included with your registration: PDF seminar manual.

How to Register

- Visit us online at www.halfmoonseminars.org
- Mail-in or fax the attached form to 715-835-6066
- Call customer service at 715-835-5900

Webinars are presented via GoToWebinar. Instructions and login information will be provided in an email sent close to the date of the webinar. For more information, please visit our FAQ section of our website, or visit www.gotowebinar.com.

Cancellations: Cancel at least 48 hours before the start of the webinar, and receive a full tuition refund, minus a \$39 service charge for each registrant. Cancellations within 48 hours will receive a credit toward another webinar or the self-study package. You may also authorize another person to take your place.

Continuing Education Credit Information

This webinar offers a 6.0 hour continuing education opportunity to California professional engineers and architects. Continuing education is not required for license maintenance in California.

Professional engineers and architects seeking continuing education credit in other states will be able to claim the hours earned through this webinar, in most cases. Refer to specific state rules to determine eligibility.

The American Institute of Architects Continuing Education System has approved this course for 6.0 LU | HSW (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

The International Code Council has approved this event for .6 CEUs in the specialty area of Fire (Preferred Provider No. 1232).

Visit this course listing at www.halfmoonseminars.org for updates on pending credits.

Completion certificates will be awarded to participants who complete this event, respond to all prompts, and earn a passing score (80%) on the quiz that follows the presentation (multiple attempts allowed).

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Recordings of each webinar are available for purchase. See course listing online for more information and please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

California - Complying with Fire, Building and Mechanical Codes

Live, Interactive Webinar - Thursday, March 24, 2022

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HalfMoon Education Inc.
PO Box 278
Altoona, WI 54720-0278



Learning Objectives

You'll be able to:

- Discuss** fundamentals of fire resistance.
- Review** ventilation requirements under building and mechanical codes.
- Focus on** fire code requirements for ventilation systems.
- Consider** the limitations of ventilation system designs.
- Explore** options for smoke control in ventilation systems.
- Examine** alternate means for fire-rated ducts and enclosures.
- Discuss** methods of stairwell pressurization through AC 179.



HalfMoon Education Live Webinars California - Complying with Fire, Building and Mechanical Codes

Live, Interactive Webinar - Thursday, March 24, 2022



- Understand** the fundamentals of fire resistance and examine building code ventilation requirements
- Discuss** mechanical code ventilation requirements
- Explore** limitations of designs, including hanging systems and firestopping designs
- Examine** fire-rated ventilation ducts for smoke control
- Analyze** common mistakes that happen when working with alternate means for fire rated ducts and enclosures
- Discuss** AC179 Scope and associated fire-rated ventilation duct configurations from ISO and ASTM test standards

Continuing Education Credits

- | | |
|---|---|
| Professional Engineers
6.0 PDHs | Architects
6.0 HSW CE Hours
6.0 AIA LU HSW |
| International Code Council
.6 CEUs (Fire) | |



Agenda

Building Code Overview

- What are common building code requirements for ventilation?
- Ventilation equipment
 - Penetration protection
- When are ventilation requirements applicable?
- Applicable building code
 - Common conditions that require ventilation
- Why are they required?
- Acceptable level of risk
- Fundamentals of when/how to provide fire performance
- Symmetrical vs non-symmetrical
 - Continuity vs. test standards
- Ventilation requirements
- Applications
 - Penetrations
 - Shaft extensions
- Limitations of designs
- Built fire resistive rated assemblies vs product assemblies
 - Listings/approved designs
- Watch-its/common mistakes
- Conclusion
- Q&A

Mechanical Code Overview

- Fundamentals
- Differences between grease duct and fire rated ventilation duct
 - Industry jargon
- Ventilation requirements
- Hazardous exhaust applications
 - Penetrations with and without fire dampers
 - Temperature control by insulation and clearance
- Limitations of designs
- Damper compatibility
 - Accessories
- Watch-its/common mistakes
- Conclusion
- Q&A

Fire Criteria Focus

- Fundamentals NFPA 1 and 101
- Symmetrical vs non-symmetrical
 - Continuity
 - Test standards and industry jargon
- Ventilation requirements NFPA 90A and 96
- Applications
 - Penetrations
 - Zero clearance and shaft protection
- Limitations of designs
- Hanging systems
 - Firestopping designs
- Watch-its/common mistakes
- Conclusion

Added Value:

Enhance your learning - a recording of this webinar will be available for attendees to stream online for two weeks after the program date.
(live webinar attendance required to receive credit)

Smoke Control System Considerations

- Fundamentals:
- IBC 909/IMC 513
 - NFPA 92 and 90A
 - Fire rated ventilation duct for four methods of smoke control
- Ventilation requirements:
- Duct protection
 - In line fan protection
 - Power and control protection
 - Dedicated vs non-dedicated equipment
- Limitations of designs:
- Smoke modes/sequences
- Fireman's over-ride panels
- Watch-its/common mistakes
- Conclusion
- Q&A

Alternate Means for Fire Rated Ducts and Enclosures

- Fundamentals of equivalent fire resistance:
- Test standards and acceptance criteria
 - Prescriptive compliance
 - Alternative methods (Equivalence)
 - Code modifications (Variance)
- Limitations of designs:
- Symmetrical vs non-symmetrical
 - Continuity
 - Hose stream testing
 - Temperature control
- Watch-its/common mistakes
- Conclusion
- Q&A

Stairwell Pressurization Through AC179

- Fundamentals:
- AC179 Scope and associated fire rated ventilation duct configurations from ISO and ASTM test standards
 - Shaft replacement mean symmetry protection
- Alternative protection for fire damper omission
- Limitations of designs:
- Evaluation service reports and their associated IAS tested designs
 - Analyzing probable fire scenarios for penetrations with and without fire dampers
 - Following the most stringent criteria when multiple sections apply
- Watch-its/common mistakes
- Avoiding pressurization design to failure scenarios
- Conclusion
- Q&A

To register and to see other learning opportunities, please visit:
www.halfmoonseminars.org
or call our Customer Service Department at (715) 835-5900

Faculty

- Robert Gerard, PE** *Coffman Engineers, San Diego, California, office*
With more than a decade of experience working in countries around the world, including the United States, Canada, New Zealand, Australia, Saudi Arabia and the United Kingdom, Mr. Gerard brings an international perspective focused on performance-based design and code compliance to the US regulatory environment. His work includes major mixed-use buildings, warehouses, distribution centers, research and testing facilities, hotels, resort casinos, transportation centers, museums, high-rises and office buildings, as well as numerous publications and educational seminars, workshops and conferences. Many of Mr. Gerard's projects have involved complex fire safety issues, often utilizing advanced computational fluid dynamics (CFD) and finite element modeling (FEM), peer review teams, and engagement with approval authorities. His specialties include smoke control design, mass timber buildings and structural optimization utilizing state-of-the-art fire and smoke modeling software to demonstrate safety through performance-based design approaches, including engagement with approval authorities to gain approval for performance-based alternate means and methods requests.
- Connor Reuss, PE** *Coffman Engineers, San Diego, California office*
Before joining the mechanical engineering team at Coffman Engineers, Mr. Reuss was the senior mechanical and fire plan review engineer at a reputable private plan review and inspection company in Southern California. In addition to receiving his professional engineering license in Mechanical Engineering, he is an ICC certified Mechanical Plans Examiner, ICC certified Plumbing Plans Examiner, ICC certified Energy Plans Examiner and NFPA certified Fire Plans Examiner. Being an expert on the code, Mr. Reuss brings a unique perspective to the design process. He has been a part of several major projects including multistory mixed-use buildings, warehouses, OSHPD regulated hospitals, OSHPD regulated clinics, OSHPD regulated correctional facilities, research and lab facilities, hotels, resort casinos, DSA regulated educational facilities and office buildings. Along with his work, Mr. Reuss is a part-time professor at San Diego State University (SDSU). He and a colleague co-teach a course within the SDSU College of Engineering.
- David Phillips, PE** *Coffman Engineers, San Diego, California office*
Mr. Phillips has ten years of experience with professional fire protection and building code consulting along with conceptual design and special inspection of smoke control systems. His experience includes conceptual design and special inspection of both passive and active smoke control systems in high-rises; smoke exhaust systems in atria and hybrid pressurization-airflow systems; modeling and evaluation of smoke control systems using CONTAM and FDS; plan review of sprinkler and fire alarm systems; code consulting for egress analysis, height and area, construction type, opening protection, vertical openings, and exterior walls; engineering judgements for rated assemblies; as well as alternate materials and methods reports for travel distances, exterior claddings, and construction materials. Mr. Phillip's project experience includes airport terminals, high-rise apartments, office buildings and hotels, distilleries, warehouses and hospitals. He has engaged with numerous regulatory authorities including CSFM, HCAI, NAVFAC, GSA, UC fire marshals and city and county code officials.

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