

Agenda

Presented by George Walters III, PE, CPD

Agenda Day One

Introduction to Pumps: Operations, Principles and Calculations

- Operation of centrifugal pumps
 - Intro, terms, definitions
 - Centrifugal pump construction, components, impeller, motor, volute
 - Incompressible fluid, pumping equations
 - Closed system, open system, parallel and series pumping applications
- Reviewing hydraulic principles and calculations
 - Fixture units and GPM
 - Friction losses/allowable pressure drop
 - Static pressure vs. dynamic pressure
 - Equivalent lengths

Design Standards and Codes

- IPC – International Plumbing Code – state amendments NFPA
- UFC – Unified Facilities Criteria (military requirements)
- WBDG – Whole Building Design Guide
- AHJ – Authority Having Jurisdiction
- The interpreter of the Code, Plumbing Inspector, Fire Marshall
- LEED – Leadership in Energy and Environmental Design
- USGBC

Agenda Day Two

Piping System Components, Materials and Calculations

- Piping system components and materials
 - Copper vs. plastics, galvanized steel and stainless steel
 - When, where, why
 - BFP, PRV, meters
 - Valves, ball valves, gate valves, butterfly valves, flow balancing valves
- Making basic system calculations
 - Pipe sizing
 - Friction loss calculation
 - Pump sizing

Handling Pump and Piping System Problems

- Booster pumps
- Circulating pumps, chilled water, hydronic heating, domestic hot water
- Fire pumps

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Pumping and Piping Systems

Online - Thurs., August 18 and Fri., August 19, 2022

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PO Box 278
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Learning Objectives

You'll be able to:

Discuss centrifugal pump components and construction.

Define friction losses and allowable pressure drop.

Review hydraulic principles and calculations.

Compare piping materials, including copper, plastics, galvanized steel and stainless steel.

Identify ball valves, gate valves, butterfly valves and flow-balancing valves.

Make basic system calculations for pipe sizing, pump sizing and friction loss.

Address pump and piping system problems.



HalfMoon Education Live Webinars

Pumping and Piping Systems

Live, Interactive Webinar

Thursday, August 18 and Friday, August 19, 2022



Explore the operation of centrifugal pumps

Review hydraulic principles and calculations

Learn about design standards and codes, including the IPC, UFC and WBDG

Discuss piping system components, including valves and meters

Compare materials, including metals and plastics

Handle pump and piping system problems

Continuing Education Credits

Professional Engineers

6.0 PDHs

International Code Council

.6 CEUs (Building)

Architects

6.0 HSW CE Hours

6.0 AIA LU | HSW

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Faculty

George Walters III, PE, CPD *Mechanical Engineer at BMH Engineering LLC*
Mr. Walters is a professional engineer and is certified in plumbing design through the American Society of Plumbing Engineers. His responsibilities overlap into the professional engineering areas of civil engineering, mechanical engineering, chemical engineering, fire protection engineering, and process engineering. He performs calculations, sizes equipment, and prepares plumbing design and construction documents. Mr. Walters is a member of the Atlanta Chapter of the American Society of Plumbing Engineers (ASPE). He earned his B.S. degree in Mechanical Engineering from Georgia Tech.

Webinar Information

Day One: Thursday, August 18, 2022
11:00 am - 2:15 pm CDT (including a 15-min. break)

Day Two: Friday, August 19, 2022
11:00 am - 2:15 pm CDT (including a 15-min. break)
(please log into the webinar 15 - 30 minutes before start time)

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

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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.

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Additional Learning

Writing Successful Proposals and RFPs
- Tues, July 19, 2022 | 8:30 am - 5:00 pm CDT

Shallow Foundation Design
- Wed, July 20, 2022 | 11:00 am - 2:15 pm CDT
- Thurs, July 21, 2022 | 11:00 am - 2:15 pm CDT

International Residential Code 2021
- Thurs, July 21, 2022 | 9:00 am - 5:00 pm CDT

Designing and Constructing a Net-Zero Energy Home
- Mon, July 25, 2022 | 11:00 am - 3:30 pm CDT
- Fri, July 29, 2022 | 11:00 am - 1:30 pm CDT

2021 International Residential Code: Residential Non-Structural Design
- Wed, July 27, 2022 | 11:00 am - 3:30 pm CDT

Designing for Accessibility under ADA Standards and IBC
- Wed, July 27, 2022 | 8:30 am - 12:15 pm CDT
- Thurs, July 28, 2022 | 8:30 am - 12:15 pm CDT

Designing Accessible Pedestrian Facilities under ADA, IBC and PROWAG
- Wed, Aug 3, 2022 | 8:30 - 11:45 am CDT
- Thurs, Aug 4, 2022 | 8:30 am - 12:15 pm CDT

Practical Engineering Economics
- Thurs, Aug 4, 2022 | 8:30 am - 4:20 pm CDT

Handling Ethical Issues Associated with Defects and Failures
- Tues, Aug 9, 2022 | 10:00 - 11:00 am CDT

Structural Forensic Engineering
- Wed, Aug 10, 2022 | 10:00 am - 1:30 pm CDT
- Thurs, Aug 11, 2022 | 10:00 am - 1:30 pm CDT

Sustainable Concrete Construction
- Wed, Aug 17, 2022 | 2:00 - 4:00 pm CDT

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Continuing Education Credit Information
This webinar is open to the public and is intended to offer 6.0 PDHs to professional engineers and 6.0 HSW continuing education hours to licensed architects in all states.

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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 Building (Preferred Provider No. 1232).

Attendance will be monitored, and attendance certificates will be available after the webinar for those who attend the entire course and score a minimum 80% on the quiz that follows the course (multiple attempts allowed).

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.
(Must attend live webinar to earn live webinar credits)

Registration

Pumping and Piping Systems
Live, Interactive Webinar - Thursday, August 18 and Friday, August 19, 2022

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Phone: 715-835-5900	Additional Registrants: Name: _____ Occupation: _____ Email: _____ Phone: _____ Name: _____ Occupation: _____ Email: _____ Phone: _____	
Fax: 715-835-6066	Code:	Email address is required for credit card receipt, program changes, and notification of upcoming seminars and products. Your email will not be sold or transferred.
Mail: HalfMoon Education Inc., PO Box 278, Altoona, WI 54720-0278		() I need special accommodations. Please contact me.
Complete the entire form. Attach duplicates if necessary.		

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