



Upcoming Event Excitement!

We have a lot of exciting events around the corner!

“Spring Research Promotion”

Captain’s Choice
Golf Tournament
Friday March 22

See Page 4

Sponsorship Opportunity!

Promote your Company
thru our Chapter
See Details Page 5

Sustainability Activity

Date TBD

Next Meeting Tuesday, March 12th

Harbor Breeze at Patriots Point, Mt. Pleasant

BOG Meeting 5:00-5:30

Happy Hour 5:30-6:00

Chapter Meeting/Dinner 6:00-7:00

\$30/person

[REGISTER ONLINE](#)

March 12, 2019

Maximizing Condensing Boiler Performance

Joseph “Jody” Samuel Jr.

Application Engineer, Viessmann Manufacturing Co. (U.S.)

Presentation Summary:

This presentation will explore the condensing theory for efficient application of natural gas fired condensing boilers. The following focus topics will be discussed: Operation of condensing boilers in relationship to the flue gas dew point and its effect on efficiency, design water temperature selection and system temperature control and their effect on delivered performance, and heat emitter sizing and selection to maximize system performance. We will also discuss boiler and system piping layout strategies for minimizing operational costs while maximizing efficiency of operation. In addition, during the discussions we will contrast the different approaches between applying condensing equipment as a replacement in existing systems vs. a completely new project.

Speaker:

Joseph “Jody” Samuel Jr.

Jody Samuel is a graduate of Maine Maritime Academy with a degree in Marine Engineering. While at Maine Maritime he participated in the Navy ROTC program and received his commission as a Naval Officer on Graduation. He spent 10 years in the US Navy in the Submarine Service. After his time in the Navy he entered into the Hydronics field. Over the past 20 plus years he has worked for various companies including AMTROL, Viessmann and Caleffi serving in various rolls including Product Manager, Training Manager, and Manager for Engineering Education. Currently he



ASHRAE Research Investors

Thank you for your sponsorship. If you would like to support the chapter, please contact the President.

Corporate Donors (\$1,000+)

Corporate Donors (\$500+)

Corporate Donors (\$300+)

Honor Roll Donors (100+)

Jacob A. Yount

David Kauffman

Malcolm D. Knight, PE

Marcus Dee Googer

Philip Runyon

Steven A. Marek

Randy Jones

Timothy Niles

Bret Turkall



CTTC Corner

For more information about this column, contact **Gene Brown** (gene3380@gmail.com).

Critical Room Control

At our February meeting **Kieran Donohue** gave an outstanding presentation on **Critical Room Control**. If it isn't done correctly, people die. These rooms include surgical suites, pharmacology, and patient care. There is not a lot of difference between labs and rooms for patient care. Hospitals are run for profit and the conditions in the operating room must attract the best surgeons. The operating room pressure should never be negative at any time, 24/7.

Healthcare Associated Infections (HAI) are a major problem. People leave hospitals with additional infections. There are close to 100,000 deaths per year from HAI. If 3% of patients are readmitted the hospital's profits are severely impacted. Sepsis (infection) is the biggest cause of death in hospitals.

Operating rooms are now at positive pressure relative to sterile corridors. Some people think the pressure should be negative. There is a lot of discussion on this issue. There can be 60 air changes per hour and the pressure must be at least .01 iwg positive. To increase pressure: 1-increase supply; 2-decrease return or 3-close door or seal the room. Pressure is usually modulated by throttling return air.

A pharmacy must be maintained at .01 to .03 iwg. For comfort cooling there is no problem if 1000 cfm increases to 1500 as long as it feels OK. With critical room control, the correct CFM must be provided. There must be modulating actuation on controls so that the position of the actuators is known. For a pharmacy with hazardous compounds the pressure must be negative. When a fan stops running it must be ensured that the duct is closed off.

With some rooms, control must be maintained 24 hours per day. It is not possible to increase and decrease temperature and maintain a steady condition. A discharge air sensor is required in order to anticipate required change in supply temperature. Many users are installing a secure cellular chip to transmit information.

There are 5 modes for an isolation room: **1- isolation; 2- not isolated; 3- cleaning mode; 4- clearing mode (must be vacant one hour) and 5- vacant.**

Engineering of healthcare is a growing field. Healthcare is moving toward 20% of GDP in 2024. Design for easy maintenance. Meet with the service people to make sure they can maintain the systems.



Regional Update:

All members are encouraged to submit entries for a technology award. This will be a good advertisement for your company and will help our chapter compete for regional awards.

Building Energy Quotients (BEQ). BEQ looks at buildings before they are built and after they are constructed. BEQ gives a list of low hanging fruit for saving energy. The potential for saving energy is typically 30% as compared with a few years ago.

Randy Jones
Treasurer

Research Endowments Update:

This year we have a new Endowment to fill, one in honor of **Clarence Hamm**. The great benefit to our Chapter is that once this commitment as a group to this Endowment is filled, **the Chapter will receive 5% annually**. So, if you are thinking of contributing to research this year, please think about adding a little to this Endowment. Our other Endowments can be added to as well, as there is no limit as to how much is in the Endowment. The nice thing we get 5% annually on what is in these Endowments.

Did you know that RP also has a small part in scholarships? Last year Society scholarships went to 34 different people. As part of our RP goals this year our chapter has a goal of raising \$250 for scholarships. When donating online just fill in the amount you would like to donate under the ASH-RAE Scholarships line. Should we complete this goal by November 15th we will get additional PAOE Points!!!!!!!!!!!!

David Kauffman
RP Chair

Government Affairs Committee Update:

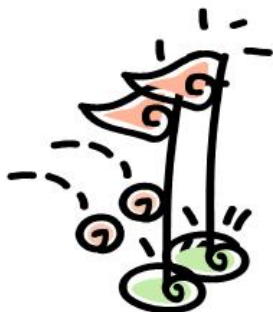
We are planning on our legislative day at the SC Statehouse with the Greenville Chapter and the South Carolina Chapter. If you are interested in participating, or if you have a personal contact in the SC House or Senate, please contact me. We are currently looking at the late February – early March timeframe.

Pete Conroy
Government Affairs
Committee Chair

Presidential Corner:

With the RP Golf tournament coming up this is our chance to reach our goal. Hole sponsorships at the best way to ensure we meet this goal. We are currently tracking to fall short of last year. Let's take the opportunity to surpass last year and the golf tournament is a great way to do it. Hope to see you all there.

Jacob A. Yount
Chapter President



ASHRAE GOLF

CHARLESTON CHAPTER'S

"SPRING RESEARCH

PROMOTION"

CAPTAIN'S CHOICE GOLF TOURNAMENT

FRIDAY, MARCH 22, 2019

**9:30AM SHOTGUN START
CHARLESTON MUNICIPAL GOLF COURSE
2110 MAYBANK HWY
CHARLESTON, SC 29412**

**\$100.00 includes GOLF, CART, LUNCH TO BE
SERVED AFTER GOLF, BEVERAGES, and
PRIZES (CLOSEST TO PEN, LONG DRIVE,
ETC)!!!!**

Bring your own team or we can assign you to one.

**Player:
Player:
Player:
Player:**

**Contact: Philip Runyon (843)729-1883; David Kauffman(843)693-1908;
or Greg Ashcroft (843)300-2851**

**Email this form to: prunyon@chapmancompany.com, greg.ashcroft@trs-
sesco.com, & david.kauffman@rpecontracting.com**

SPONSORSHIP LEVEL DESCRIPTION

GOLD LEVEL

- Company name will be prominently displayed at ALL Chapter activities, i.e. Chapter Meetings, Golf Outing (as a hole sponsor), Technical Seminars.
- (2) Spots at all Research Promotion activities including the spring golf tournament
- Special recognition in publications including the *ASHRAE Insights and Monthly acknowledgement in The Charleston "Gee Chee" Chapter Newsletter.*
- Hole Sponsor in the Chapter Research Promotion Golf Tournaments
- Honor Roll Research Donor recognition in Chapter Newsletter (\$ 800 Contribution)
- Sponsor of Engineering Week Activities

SILVER LEVEL

- Hole Sponsor for the Chapter Research Promotion Golf Tournament
- Honor Roll Research Donor recognition in Chapter Newsletter (\$ 500 Contribution)
- Special recognition in publications including the *ASHRAE Insights and Monthly acknowledgement in The Charleston "Gee Chee" Chapter Newsletter.*
- Sponsor of Engineering Week Activities

BRONZE LEVEL

- Hole Sponsor in the Chapter Research Promotion Golf Tournament
- Honor Roll Research Donor recognition in Chapter Newsletter (\$ 300 Contribution)
- Special recognition in publications including the *ASHRAE Insights and Monthly acknowledgement in The Charleston "Gee Chee" Chapter Newsletter.*

HONOR ROLL LEVEL

- Honor Roll Research Donor recognition in Chapter Newsletter (\$ 250 Contribution)
- Special recognition in publications including the *ASHRAE Insights and Monthly acknowledgement in The Charleston "Gee Chee" Chapter Newsletter.*

- Chapter Meeting sponsors are also available recognition on front page of Chapter Newsletter and recognition at the meeting (ADD \$200)

ASHRAE CHAPTER SPONSORSHIP
REGION IV

CHARLESTON
CHAPTER 2018-2019
FISCAL YEAR

NAME _____

COMPANY/ORGANIZATION _____

MAILING ADDRESS _____

TELEPHONE: _____ FAX: _____

EMAIL: _____

SPONSORSHIP LEVELS: GOLD \$1,000 _____
(PLEASE CHECK ONE)

 SILVER \$ 500 _____

 BRONZE \$ 300 _____

 HONOR \$ 250 _____

CHAPTER MEETING SPONSOR ADD \$200

PLEASE EMAIL COMPLETED FORM TO:
PHILIP RUNYON:
PRUNYON@CHAPMANCOMPANY.COM



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BOG— Steve Marek, Philip

Runyon, Pete Conroy

2019 Events

March 12th, 2019 **Meeting @ Harbor Breeze—**

“Maximizing Condensing Boiler Performance”

March 22nd, 2019 **Golf Outing @ Charleston Municipal Golf Course—**

9:30 am Shotgun Start

April 9th, 2019 **Meeting @ Harbor Breeze—**

TBD

May 14th, 2019 **Meeting @ Harbor Breeze—**

TBD

June 2019 **Summer Low Country Boil Social @ TBD**

What is YEA?

To ensure a bright future for ASHRAE and the industry, the Young Engineers in ASHRAE (YEA) Committee was developed to create programs and develop a path for our young professional members. Any current ASHRAE Affiliate, Associate or Member who is 35 years of age or younger is considered a YEA member, and automatically has a wide variety of programs, events, and opportunities at their fingertips!

