

CHARTERED APRIL 14, 1971

2018

June

MONTHLY NEWSLETTER FOR
THE REGION 4
CHARLESTON CHAPTER 113 OF
ASHRAE

The Gee Chee

Upcoming Event Excitement!

We have a lot of exciting
events around the corner!

June 18th:

**Summer Low Country
Boil Social!**



Next Meeting
Monday, June 18th

The Wreck on Shem Creek, Mt. Pleasant
Happy Hour & Low Country Boil 6:00-8:00

\$25/person

[REGISTER ONLINE](#)

Presidential Corner

by Philip Runyon

Please come out to our year end Social being held at The Wreck on Shem Creek, Monday June 18th. You can sign up online which will help with our head count for giving the restaurant a heads up for the Lowcountry Boil. We will be installing our new officers for next year and I am excited about all of the new faces we have taking over board positions and committee positions.

I want to thank everyone that has been involved with our Charleston Chapter for 2017-2018. It has been an honor to serve as President and I look forward to our continued growth with Jacob taking over next year.

Please spread the word about our Social Event, the more the merrier. Guests and significant others are encouraged to attend. See you on the 18th!

Philip Runyon

RP Corner

by Steve Marek

Hello Everyone,

What a Great Year.

Let's just keep it simple, \$19,083.43 well over our Goal of \$17,000. We completely funded \$3000+ Eric Crawford Endowment and started a new endowment for Clarence Ham that we will work on next year.

Just a GREAT YEAR, THANKS EVERYONE.

Thanks everyone and see you Monday,

Steve Marek

RP Chairman Charleston Chapter



ASHRAE Research Investors

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

Corporate Donors (\$1,000+)

Chapman Company
Triad Mechanical
James M. Pleasants
Rivers Plumbing & Electric

Corporate Donors (\$500+)

MSS Solutions
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Ron Runyon
Del Laquiere
Greg Hudson
George Lee
Forney Lowe



CTTC Corner

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

At our May meeting, Vijayanand Periannan gave an outstanding presentation. MRE (moisture removal efficiency) is a new metric. It can be expressed as pounds removed divided by kilowatt hours for the same period.

DOAS, dedicated outdoor air systems, have been around for 20 to 25 years.

The biggest humidity load is ventilation. More outside air (OA) is better but if it is not conditioned there will be a humidity problem.

Schools have been shut down for mold problems. Buildings without positive pressure can have problems. Be sure to calculate all of the latent load and design the system to handle it. Unoccupied hours can create problems. If pressurization is shut down there will be infiltration. With intermittent AC in the summer cold air will hit hot humid air.

When OA is shut off during unoccupied hours the RA should be routed through the dehumidification system.

Decouple the latent load. Rooftop units are designed for high sensible heat ratio (SHR).

Design DOAS to deliver lower dew point (DP) than the space DP.

For DOAS a DP of 45 F may be required. With a supply of 50 DP, the volume of air might have to be doubled for control of space RH.

Rooftop units will not remove moisture on moderate rainy days. The units may deliver air at 75 F.

The occupants control temperature with the thermostat and do not control humidity.

The problem occurs with low ambient temperature and high humidity.

DOAS systems include desiccant and non-desiccant installations.

Design DOAS systems for dehumidification design days, not cooling design days.

In one example 118 tons were required for brute force operation and 76 tons would be adequate with a desiccant wheel.

With a desiccant wheel, hotter hot air and colder cold air will result in more moisture removal.

Condenser waste heat can be used for entering hot air.

Refrigeration can take air to 55 DP and the wheel can take it to 45 DP.

With an energy recovery ventilator (ERV) tonnage can be reduced as much as 50%.

With a chilled water beam there is no choice but to remove humidity separately.

With low DP, you can let temperature go higher and be comfortable.

Operating costs for a year will be cut by about 50% with a desiccant wheel.

In humid areas a chilled beam may be safer with a DOAS. With a DOAS a higher chilled water temperature can be used.

For an existing system the existing AHU may be retained and the DOAS can supply air to mix with the return air (RA).

Desiccant wheels using condenser heat are the most efficient.



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2018 Events

- June 18th, 2018 **Summer Low Country Boil Social @ The Wreck on Shem Creek—**
106 Haddrell Street, Mt. Pleasant, SC @ 6:00 - 8:00 PM

What is GGAC?

The Grassroots Government Advocacy Committee shall be responsible for organizing ASHRAE members at the grassroots level to influence and educate local, state, provincial, and national government bodies and officials in areas of interest to ASHRAE members, in order to better coordinate efforts and understanding between ASHRAE members and government as well as being responsible for developing the extent and the manner in which ASHRAE implements and pursues actions to influence government affairs and public policy.

A new standing committee beginning in Society Year 2013-14, the Grassroots Government Advocacy Committee (GGAC) wants members at all levels of ASHRAE to be a part of this new and exciting program. In Society Year 2015-16, the Advocacy Committee and the Grassroots Government Activities Committee merged into the Grassroots Government Advocacy Committee, bringing all of ASHRAE's government affairs under one umbrella.





You Are Invited!

ASHRAE's Charleston Chapter
invites you to join us

**MONDAY
JUNE 18**

for our
**ANNUAL
SOCIAL**

at
**THE WRECK ON
SHEM CREEK**

106 Haddrell Street
Mt. Pleasant

6:00 – 8:00 p.m.
Happy Hour & Low
Country Boil

\$25.00
per person

*Join us as we
recognize past
officers & install
new officers*

*Spouses & significant others
invited!*