ASHRAE Kansas City Chapter

February 2023 Breeze

Fundamentals of the Industrial Refrigeration Industry

Presenter: Jamey Price

Monday, April 3rd 2023

11:30 AM Check-In / Networking
11:50 AM Announcements
12:00 PM Presentation

Grundfos Pumps Corp. - Training Center
9300 Loiret Boulevard
Lenexa, Kansas 66219

RSVP at https://www.kcashrae.org/

Deadline: Midnight March 29th
$25 = Online before deadline
$30 = after RSVP deadline
*If you haven't prepaid for a meeting, you are **required to pay cash or check at the door**. Invoicing is not an option.
No show will not be refunded
PDH Available
Boxed Lunches & Refreshments provided!

President's Message

Honoring those who have served ASHRAE

At our April meeting we will be hosting our Past Chapter Presidents as we do every year. We have a long and distinguished list of industry professionals who have taken the time to lead our chapter. These include the following:

Joseph Becker, Tom Benassi, Stuart Braden, Jim Burger, Kelley Cramm, Blake Ellis, Jeff Ewens, Jarrod Foster, Jason Funk, Robert Graham, Don Hail, Kevin Harre, Stephen Ivesdal, Herold Jordan, Bradley Krehbiel, Alan Lankford, Jack Larue, Thomas Loscalzo, Kent McCosh, James Megerson, Kevin Morris, Dieter Myers, Susan Nagel, James Noe, Ralph Preston, Mark Riscoe, James Root, Frank Schroer, Laurence Staples, James VanHoecke, and Alfred Witteborg.

The most recent inductee into this group is last year's Chapter President, Ann Peratt. Ann has served as Research Promotion Chair, Chapter Technology Transfer Chair (in charge of meetings), Treasurer, Secretary and Student Activities Chair. She also assisted with the Golf Tournament, website, YEA, and chapter history. Ann helped with the 2019 ASHRAE Annual Meeting held in Kansas City and the ASHRAE Conference and Exposition Committee. In addition, Ann is still serving on a technical committee after her tenure of officer duties. Having been the successor in these positions from Treasurer through President, I appreciate the tremendous organization and advice Ann has left in all these positions. I can also say that her example has encouraged me that I could do more than I might have realized. With this history Ann has earned the Chapter Service Award.

We have people who have served on a variety of ASHRAE roles also serving in our chapter leadership. They bring valuable knowledge to chapter leadership and planning. Many thanks to all those who have served our chapter.

We are also honoring life members, though it is our life members that honor ASHRAE by finding something in ASHRAE worth committing 30 years to while remaining involved with and supporting ASHRAE through their membership. Thank you.

Several chapter committees have events for the spring in the works, read on and stay tuned. We have had several people reach out with offers to sponsor or host some of these events. Thank you to all our supporters. Join us for our April luncheon. Our Board meetings continue to be open to members as well. See the events page on the website for information on how to join.

Amy Stadler
KC Chapter President 2022-23

Publication of the Kansas City Chapter of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
This newsletter is a publication of the chapter and not the Society
Newsletter Editor: Alan Sparling (asparling@p1-service.com) http://www.kcashrae.org/

ASHRAE Kansas City Chapter

April Meeting

Grundfos
9300 Loiret Blvd
Lenexa, KS 66219

Monday, April 3rd
11:30 Check-In/Networking
11:50 Announcements
12:00 Presentation

Register at www.kcashrae.org.
Registration includes boxed meal.
In-Person Cost: $25 if registered by March 29th, $30 after.
Virtual Option - No Cost

FUNDAMENTALS OF THE INDUSTRIAL REFRIGERATION INDUSTRY

Come and learn about the basics of the refrigeration cycle and how it relates on an industrial level. Take a dive into information about different refrigerant properties and the advantages and disadvantages of certain refrigerants.

Presented by:
Jamey Price

PAST PRESIDENTS AND MEMBERSHIP PROMOTION

Help us welcome Past Presidents and encourage membership promotion. We strive to include as many members of our industry that we can and welcome all to join!

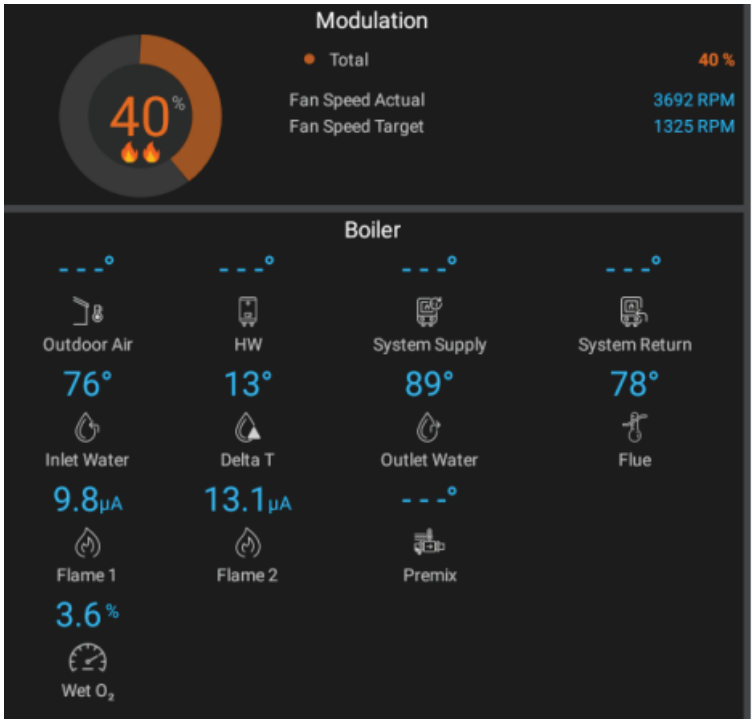
Sustainability

Decarbonization Through Other Means

Much of the talk about the need for decarbonization has focused on electrification of buildings and their systems, and rightly so, but I recall the previous ASHRAE president, Mick Schwedler's, lecture to our chapter last year on the topic, and the fact that decarbonization can be achieved through a few ways. One of those ways would be to improve the fuel efficiency of existing buildings. So, for this month's article, I wanted to focus on two ways to do just that with commercial HVAC boilers.

The most common retrofit I see is replacing non-condensing boilers (~80% combustion efficiency) with condensing boilers (~95-98% combustion efficiency). This is an easy step to take when those older boilers have reached the end of their lives; however, taking this switch-out step alone does not maximize the efficiency of those condensing boilers. To operate at condensing heating hot water return temperatures and more standard temperature differentials, the design parameters may need to be changed. These changes can have a downstream effect on coils, pumps, and pipe sizes. It is not abnormal to see condensing boilers put in while utilizing the existing (non-condensing) design parameters during peak loads, and then adding an outdoor temperature reset sequence when the boilers are used for off-peak loads or dehumidification sequences to utilize those condensing efficiencies.

One technology that can also be employed to increase combustion efficiency (and thus reduce emissions through the life of the boiler) would be to utilize oxygen (O2) trimming controls. Measuring and controlling the O2 levels in the combustion process is important because high O2 levels mean an increased amount of excess air is being used, and that corresponds to lower boiler efficiency. Typically, burners are commissioned at a level slightly above ideal O2 conditions because it's safer to err on the side of more excess air (not enough combustion air results in carbon monoxide formation and sooting). This safety of excess air also allows for changes in ambient air, wind speed, and barometric pressure – all of which affect air supply. Current boilers allow for the continuous monitoring of O2 levels in the combustion chamber and adjusting of the air supply to maximize the combustion efficiency no matter the firing rate or outdoor air ambient conditions.



Although building owners' first thoughts towards decarbonization may be dreams of electrification and on-site renewable energy production, a more readily accessible means may be to look at the existing fossil fuel burning systems and to maximize the efficiency of those systems.

Sustainability Committee
Larry Navran, larry.navran@se.com
Rob Lippold, rlippold@aeskc.com
Ruben Salinas, ruben.salinas@spur-design.com

Membership Promotion

The Kansas City Chapter Membership Promotions committee and the Board of Governors would like to welcome this month's new ASHRAE members. Please do not hesitate to reach out to any one listed above in regards to maximizing your membership. Remember to invite your peers and coworkers to our monthly lunch meetings and give ASHRAE a shot, you never know!

- Heather Ferry
- Logan Lickteig
- Matthew C. Perry
- Conor P. Regan
- Matthew J. Miller
- Zachary Martin
- Benjamin Todd Weigand, PE
- Bradley J. Hillebrenner
- Daniel Webb
- Nick House
- Hannah Osland

WELCOME!!

Historian Life Member Recognition

The Kansas City Chapter of ASHRAE would like to recognize our Life Members at the April Chapter Meeting. We have 94 Life Members and that is a testament of how active and involved our membership is. Requirements for Life Membership are 30 years of continuous membership and at least 65 years of age. To reach this milestone requires a huge amount of dedication and interest. One benefit of Life Membership is that dues are no longer collected.

We look forward to their attendance at the April meeting and please thank our them for their service.

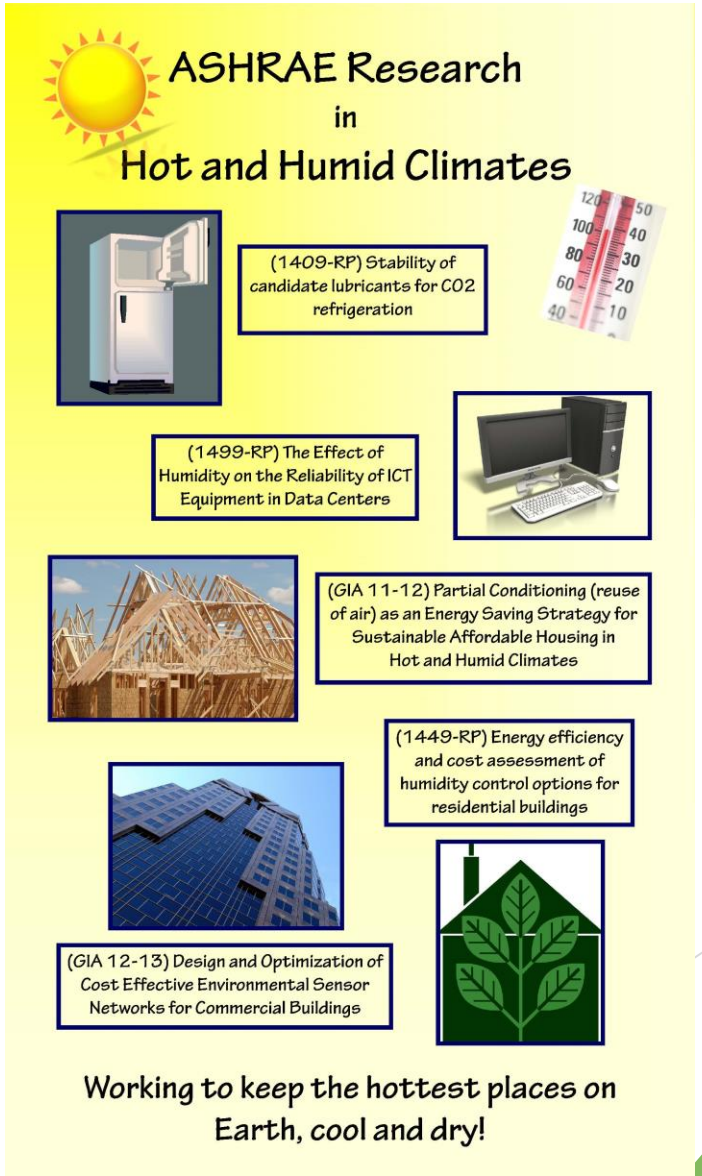
Thank you,

Stuart Braden
Chapter Historian
Kansas City Chapter of ASHRAE

2022-2023 Research Promotion Donors

- Bryan Babcock
- Larry Navran
- Prosoco Inc.
- Burns & McDonnell
- Amy Stadler
- Michelle Beck
- Mark Snyder
- Alan Sparling
- Andrea Phillips
- Jennifer Nelson
- Blake Ellis
- Donald Gray
- P1 Group
- Kelley Cramm
- Frank Schroer
- Trevor Jones
- Stuart Braden
- Jonathan Smith
- Kevin Juhl
- Jorban Riscoe
- Blackmore & Glunt
- NSC
- Prof. Terry Beck
- Mike Lorenz
- Lankford Fendler Associates

Thanks for your donations!



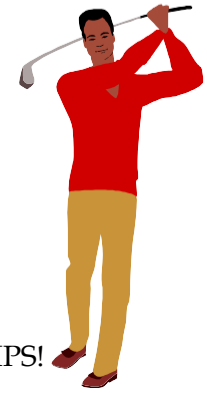
Proper Golf Attire:
- ✓ No Jeans
- ✓ Shirt with Collar

ASHRAE Kansas City Chapter

Soft Spikes Required

47th ANNUAL ASHRAE GOLF TOURNAMENT
4-PERSON SCRAMBLE FORMAT
(A & B Flights – 18 Hole Course)

FRIDAY, MAY 19, 2022



ST ANDREWS GOLF CLUB
11099 W 135th St., Overland Park, Kansas 66221

8:00am Shotgun format. Breakfast and lunch provided. (Sold Out)

1:30pm Shotgun format. Lunch and dinner provided.
All PROCEEDS GO TO RESEARCH PROMOTION AND SCHOLARSHIPS!

Registration/Reservation

Registation Opening: Monday, February 13th
Registration Deadline: Friday, May 5th

Lunch Sponsor ($1,500) – includes signage for lunch in dining area and logos on lunch boxes, sponsorship announcement during morning awards and afternoon announcements, team registration and hole sponsorship. (Limit to 1 Sponsor)

~~**Beverage Cart Sponsor ($1,500)** – includes logo on one of the beverage carts for all rounds, team registration and hole sponsorship. (Limit to 2 Sponsors)~~

Golf Ball Logo Sponsor ($1,300) – includes logo golf balls provided to all participants.

~~**Breakfast Sponsor ($1,000)** – includes signage for breakfast next to breakfast burrito station, sponsorship announcement during morning announcements, team registration and hole sponsorship. (Limit to 1 Sponsor)~~

~~**Dinner Sponsor ($1,000)** – includes signage for dinner in dining area, sponsorship announcement during afternoon awards, team registration and hole sponsorship. (Limit to 1 Sponsor)~~

Hole Sponsor ($800) – includes signage at 1 hole on the course and team registration. $250 without team registration.

Team Registration ($600) – 4-person team, greens fees, cart rental, 3 x drink tickets, and breakfast/lunch or lunch/dinner.

Game/Tent Hole Sponsor ($600) – allows 2 people at a hole for a game (John Daly long drive, bags, etc.), alcohol available for purchase from the course.

Registration online at www.kcashrae.org or mail check (payable to ASHRAE/KC Chapter) along with registration to Joe Maness, Hoefer Welker, 11460 Tomahawk Creek Pkwy Suite 400, Leawood, KS 66211, or email to joe.maness@hoeferwelker.com, asparling@p1-service.com, and jreed@mcqueenygroup.com.

ASHRAE Update – Building EQ Initiatives

Building EQ® POWERED BY ASHRAE

Building EQ

Be an Energy Genius

ASHRAE's Building Energy Quotient program takes your building to the next step beyond benchmarking.

Get Involved with Building EQ:

- For an introduction or training options, reach out to a Distinguished Lecturer for a presentation to your chapter or committee.
- Learn more at www.ashrae.org/communities/chapters/distinguished-lecturers

Benefits of Building EQ:

- Building EQ supports sustainability mandates and goals to reduce energy and carbon use by providing a consistent approach and standardized reports for an ASHRAE Level 1 Energy Audit as defined in ASHRAE Standard 211 *Standard for Commercial Building Energy Audits*
- Building EQ helps building owners/operators understand their building's current energy usages and more importantly how they can improve their building's energy performance, either through physical renovation or changes in operating practice.
- Building EQ goes beyond ENERGY STAR Portfolio Manager benchmarking by offering actionable recommendations and concrete energy conservation measures as part of the Level 1 Energy Audit.
- Building EQ helps ASHRAE members offer valuable services to their clientele through benchmarking and energy auditing along with an Indoor Environmental Quality survey with recorded measurements.
- When used in conjunction with Standard 211 *Standard for Commercial Building Energy Audits*, Building EQ empowers building owners to understand the value and efficiency of their building assets and, more importantly, how they can improve their buildings' performance, reduce costs, and comply with the state's energy regulations with concrete building solutions.

Recent Updates to Building EQ:

- Three new operational carbon metrics were added to the Portal tracking total annual including total annual GHG emissions, total annual GHG emissions per square foot, and a Building EQ Carbon Performance Score (ratio of the rated building emissions to the baseline building emissions). As part of this change, Building EQ is also updating the electrical site-source conversion factors to reflect specific grid conditions rather than just one national average. The United States and Canada have been updated to date and up to 15 other countries/regions will be updated by the end of the Society Year.
- An update to the Building EQ As Designed assessment and rating was launched that uses models for both the baseline and candidate buildings. The modeling follows the performance rating method (PRM) as defined in Appendix G of ASHRAE Standard 90.1. With this change, one building simulation workflow can be used for multiple purposes, saving considerable time and effort, and improving the accuracy of the As Designed assessment. The spreadsheet audit report

is now available for all users and all projects for the $50 fee. The Portal auto-populates this ASHRAE Standard 211 compliant Excel spreadsheet report based on the information entered into the Portal.

- A search function has now been added to the Energy Efficiency Measures (EEM) pull down menus under the EEM Tab. This allows you to quickly search the list based on key words.
- A sample project is now added to each new account to allow new users to test and experiment with the Portal before launching their first project.
- An alternate label report bringing back the old letter grades was added as an option for users who looking for a more defined rating approach.
- Both French and Spanish versions of the Portal are available for use by users.

Building EQ in Green Globes:

- The Green Building Initiative's (GBI) Green Globes rating systems for new construction and existing buildings have recently added alternative pathways for project teams who prefer to use ASHRAE Building EQ as an alternative to ENERGY STAR® and/or other benchmarking processes. This represents an opportunity to provide users with more options that make sense for their building.
- Green Globes for New Construction 2021 (NC 21) has adopted ASHRAE Building EQ As Designed for international projects to evaluate building energy performance based on energy modeling inputs. Point scoring within Green Globes NC 21 begins with 10 points for an 85 As Designed score, up to a maximum of 180 points for a 50 or lower score – potentially 18% out of all points available in Green Globes NC 21.
- Green Globes for Existing Buildings 2021 (EB 21) adopted ASHRAE Building EQ In Operation for use by all existing commercial buildings to benchmark against the median performance of existing US buildings of similar building use, normalized by climate and occupancy. Point scoring begins with 6 points for an 85 In Operation score, up to a maximum of 100 points for a 50 or lower score – potentially 10% out of all points available in Green Globes EB 21.
- Both pathways require project teams to complete the Building EQ certification and provide the resulting label to their assigned third-party Green Globes Assessor for verification to achieve their respective points. Technical Manuals for both Green Globes NC 21 and Green Globes EB 21 include expanded guidance describing how the ASHRAE Building EQ scores are calculated using the methodology to establish benchmarks based on ANSI/ASHRAE/IES Standard 100-2015 using methodologies developed at Oak Ridge National Laboratory (ORNL). The Building EQ scoring system is also described in detail within the technical manuals' assessment guidance, including a sample ASHRAE Building EQ label and Building Performance Score.

For additional information on the benefits of Building EQ,

please visit www.ashrae.org/Building EQ

or email BuildingEQ@ashrae.org

Government Affairs

National News Updates

House Energy and Commerce Committee Passes 15 Energy-Related Bills

The House Energy and Commerce Committee (E&C), chaired by Rep. Cathy McMorris Rodgers (R-Wash.), passed 15 energy-related bills out of committee to be included in an expected Republican-led comprehensive energy package. Some of the bills included repealing the Inflation Reduction Act (IRA) or significantly reducing funding to programs and efforts stemmed from the IRA. While the Republicans can use their majority in the House to pass an energy-related legislative package, the Senate would also need to approve the effort before it reached President Biden's desk. However, there is some hope for bipartisan agreement, as demonstrated by the 3 energy-related bills from the E&C Committee that received support from at least 1 democrat.

House Appropriations Committee Hopes to Start Markup in May

Now that President Biden has released his $6.8 trillion budget plan, House appropriators will begin looking at what to keep and what to cut. The timeline of appropriations is rarely kept on schedule. The process starts in the House when they receive the President's Budget, which came about a month after the deadline of the first Monday in February. Appropriators are technically given an April 15 statutory deadline to adopt a budget resolution, but Budget Chairman Jodey Arrington (R-TX) has already said this deadline will not be met, but he hopes they will be able to begin the markup process in May. It's worth noting that Congress has only adopted a budget resolution before the April 15 deadline four times since FY1985. The "four corners" (a nickname for the House and Senate Appropriations Leadership) will begin meeting to find common ground between the two parties so they can provide instructions to the subcommittee chairs. Speaker McCarthy (R-CA) previously promised to write the FY24 budget at the FY22 levels, which would be $130 million below FY23 levels.

2023 National Energy Codes Conference in Chicago, May 2nd

This year's Department of Energy's National Energy Codes Conference will be in Chicago, Illinois on May 2nd to the 4th. Attendees will have the opportunity to learn about the latest energy code advancements, participate in discussions, and use their knowledge to inform the future of efficient and resilient building energy codes. The conference could be useful to several attendees including building officials, homebuilders, energy officers, trade associations, policymakers, and code/standard developers. Topics in the program include offerings such as workshops on decarbonization, and informational sessions on the latest IECC and 90.1 code development cycles. More information about the conference, including registration, can be found here: https://www.energycodes.gov/2023-national-energy-codes-conference

State News Updates

Johnson County, KS – Pending Building Code Updates

ASHRAE GAC committee attended the monthly JOCOBO (Johnson County Building Officials Association) meeting in March. A highlight of the meeting discussion on updating the current county building energy requirements to better align with 2024 International Energy Code (IECC). An updated draft of the revised county code is due in "early 2023" and passage of the revised code could happen as early as October 2023.

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sources:

GovAffairs@ashrae.org

KC ASHRAE - 2022/2023 Board of Governors

Position	Name	E-Mail Address
President	Amy Stadler	astadler@fscmep.com
President Elect	Mark Snyder	marksnyder@jorban-riscoe.com
Vice President	Michelle Beck	mbeck@dmi-kc.com
Treasurer	Jennifer Nelson	jennifer.nelson@hendersonengineers.com
Secretary / Newsletter	Alan Sparling	asparling@p1-service.com
BOG At-Large	Ian Kobler	ian.kobler@crbgroup.com
BOG At-Large	Meagan Gibbs	meagan.gibbs@hendersonengineers.com
Past President	Ann Peratt	ann.peratt@pkmreng.com

KC ASHRAE - 2022/2023 Committee Members

Position	Name	E-Mail Address
Built Environment Partners	Jim Noe	jnoe@epluses.com
CTTC/Programs	Michelle Beck	mbeck@dmi-kc.com
CTTC host	**OPEN**	
DiA/Diversity in ASHRAE	Kristin Phelps	kphelps@DLRGROUP.com
DiA Co-Chair	**OPEN**	
Golf	Joe Maness	joe.maness@hoeferwelker.com
Golf	Joe Reed	jreed@mcqueenygroup.com
Govt. Grassroots	Ian Kobler	ian.kobler@crbgroup.com
Govt. Grassroots - Incoming	**OPEN**	
Govt. Grassroots	Greg Paulsen	gpaulsen@trianglesales.com
Historian	Stuart Braden	Stuart.G.Braden@imegcorp.com
Historian - Incoming	**OPEN**	
Honors and Awards	Jim Noe	jnoe@epluses.com
Membership Chair	Jake Bonkowski	jbonkowski@bldgcontrols.com
Membership Co-Chair	Dan Moresi	dmoresi@bldgcontrols.com
Membership Committee	Charlie Thomeczek	Charles@metroair.com
Product Directory	Greg Paulsen	gpaulsen@trianglesales.com
Refrigeration	Kenneth Holaday	kenneth.holaday@powereng.com
Research Promotion	Mark Snyder	marksnyder@jorban-riscoe.com
Research Promotion Event	Bailey White	Bailey@lankfordfendler.com
Social Media	Ruben Salinas	ruben.salinas@spur-design.com
Student Activities Chair	Jessica Spottek	Jessica.Spottek@hendersonengineers.com
Student Activities Co-Chair	Chris Swingle	cswingle@nscapg.com
Sustainability Co-Chair	Rob Lippold	rlippold@aeskc.com
Sustainability Co-Chair	Larry Navran	Larry.Navran@se.com
Sustainability Committee	Ruben Salinas	ruben.salinas@spur-design.com
YEA Co-Chair	Ryan Mustain	ryanm@aap-kc.com
YEA Co-Chair	Austin Miller	austin@mexicoheating.com
YEA Committee	Evan Reese	emreese@burnsmcd.com
YEA Committee	Tyler Stroud	tstroud@mechsales.com
YEA Committee	Kelsey Moss	kcmoss@burnsmcd.com
YEA Committee	Joe Reed	jreed@mcqueenygroup.com
Webmaster	Bobby Caffrey	bobby@chopair.com

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BUILD YOUR STORY

Burns & McDonnell is looking for unique staff and senior level mechanical engineers that has a desire to apply their technical design experience, while actively engaging their entrepreneurial spirit. Looking for more direct client and end-user interaction? We've got it.

Whether you enjoy working with clients that are commercial, military, domestic, or international, you will have the opportunity to use those leadership and people-skills that sets you apart from your peers. You will be involved in a variety of unique design and design/build projects, from aircraft maintenance hangars and aircraft paint hangars to central plants to laboratories to international training facilities and flight simulator/training facilities and explosives research and production facilities. Be a part of an energy-filled work- place that pays for performance, where you can invest in a career that you can grow into project management or business development opportunities. We have two positions available for lead mechanical engineers with 6 to 15 years of experience in a variety of facility mechanical systems and subsystems for DoD, DOE, and Aviation projects including: chiller plants, steam and hot water boiler plants, HVAC systems, plumbing systems, steam distribution systems, hydronic systems, or whatever else you want to bring to the table. You will work with the project team throughout the design and construction process, adapting mechanical plans according to budget constraints, design factors or client needs.

If you are interested, please reach out to Rob Jordan, Mechanical Department Manager for Aviation and Federal — rjordan@burnsmcd.com or (816) 830-6190. Or visit burnsmcd.com/careers.

ASHRAE Kansas City Chapter

Are you looking for quality Engineers, Contractors, or Sales Representatives involved in the ASHRAE community, but don't know where to advertise your job posting?

KC ASHRAE has a solution for you! **A half page job posting** can be advertised in the Breeze and on the website for a **$100 RP** donation (per posting, per month).

Please contact Alan Sparling at asparling@p1-service.com if you are interested in advertising in the Breeze and online. No charge for Universities in the chapter.