



SAABE TIMES

A publication of the San Antonio Association of Building Engineers

January 2007

Mark Your Calendar—

JOIN US FOR OUR JANUARY LUNCHEON

The next General Membership Meeting of the San Antonio Association of Building Engineers is set for 11:30 am on Wednesday, January 17 at the Alamo Cafe on 281 (just north of Bitters). This month's program is sponsored by CPS Energy, and the speakers are Bob Nelson and Fred Beebe. They'll talk about CPS Energy's business services and rebate programs.

Speaker Bob Nelson works as an Engineer for CPS Energy in the Technical Services Section. He performs power quality investigations, energy efficiency audits, thermo imaging, inspections for commercial rebates and provides other technical support to CPS Energy's commercial and industrial customers.

If you would like more information about the CPS Energy commercial rebate program, please call (210) 353-2728.

The meeting will be held in the first floor Travis/Bowie rooms, to the right of the entrance. There is plenty of parking at the back of the restaurant. **Please make sure to check in at the front desk when you arrive.** Please do not leave valuables in your vehicle, as members have reported attempted break-ins in the restaurant parking lot.

Please RSVP to (210) 408-1699 by Tuesday, January 16. PLEASE RSVP so we can be sure to have enough meals on hand!

We hope to see you there! ❖

A Message from the President

by Charles Mikolajczyk, CBE-M

Well, what can I say? Christmas and New Year's have come and gone; another year is upon us along with our new budgets, equipment replacements, and probably a few broken New Year's Resolutions along the way already.

Along with the New Year, we can take some experiences from the past and apply them to situations upcoming. One of these which rapidly comes to mind is what in the world are we going to do if we don't get some rain [lots of it]! We were blessed with some rainfall Christmas Eve and again at year's end but it only measures to a drop in the bucket (pun intended) 'cause this is Texas...we have eight months of summer and guess what (it's that time again soon)! Driving around town it is easy to see the amounts of diminished landscapes due to the water restrictions. What this means for our occupation are unknown areas. And let's not forget about what this means to the Annual SAABE Picnic at the Lake...has anyone seen what Medina Lake looks like lately?

We are also excited about our new role with the SAABE Board and anticipate an interesting journey. However, following the Presidents of the past may prove more difficult than I have been led to believe! Some ten years ago I was with on the SAABE Board as a VP [with an interesting group of people by the way☺]. Back then it seemed we were scrambling to make/cover printing and postage. Due to everyone's participation and help, we now have a scholarship/educational assistance program, we are eating solid food, and we can type/send a letter without leaving the office or needing any postage...I sure miss that green salad dressing though!

It takes quite a feat to manage an organization such as SAABE, and it is pride that the Board and Committee members thrives on. It also takes a considerable amount of one's time to do so. So the next time you see Board or Committee members, please take the time and commend them for their loyalty and the service they are providing to our organization. I said this some time ago...SAABE is not an organization you belong to; it belongs to you and is there for the taking. I would find it very difficult to believe that if someone had an issue that there was not someone at a meeting that had been there before. The amount of combined knowledge at just one luncheon is overwhelming to the imagination. Always remember that; "can I ask a question?" beats "Uh-oh" every time! ❖

Editor's note: Due to a production error, the wrong "Message from the President" appeared in the December 2006 issue. This is what Bob really said. Sorry for the error and confusion. LB

A Message from the President

by Bob Beal

As you know, December will be my last month as your President. I had planned on writing something neat for my last MFP, but I found it hard to put my feelings to pen. All of you know how much I appreciated having the honor of being your president. I described my feelings many times in my MFPs of the past. However, explaining my feelings of departure from president is more difficult for me.

Let me start by saying being president has been a great experience filled with ups and downs. It has been both exciting and disappointing at times. One of the most exciting events I can remember is when we filled up the meeting room with engineers and managers fighting for our Maintenance Electrical Technicians Certificates with the city Electrical Board. One of the low times for me was when my dear friend Tom Bonin of MMT past away shortly after I took the office. Presenting a \$1,000 scholarship to Etzel Luna from Judson High School will be something I will always remember.

Talking to all of you as a group was a little challenging at times. It's funny—it took me four years to get used to addressing you, and now I will not have to do it anymore! I have a great deal of respect for all my fellow members and I am sure that SAABE will be in great hands.

I want all of you to remember that SAABE belongs to you, and like the saying goes, "we will only get the leaders we deserve." If SAABE goes downhill at some point we can only blame ourselves. So get involved. It not only makes you feel good but you are also helping others. I hope that SAABE continues to give time and money to charity. **Being able to give is the best gauge of success.**

Great effort has been made to make SAABE more fun. I hope all of you will do better job of making all the SAABE events like our Annual Holiday Social at Dave and Busters and our Annual Summer Picnic.

Welcome New Members

Please add the following names to your membership directory:

Kyle Reynolds and John Smith
Cummins Southern Plains
6226 N. IH-35
San Antonio, TX 78218
800-364-4884
kyle.m.reynolds@cummins.com

If you know someone who'd like to join SAABE, have them visit our web site at www.saabe.org to obtain a membership application. ❖

Many changes in my life have occurred since I have been president. I won the SAABE Building Engineer of the Year award. I won Engineer of the Year with Transwestern Commercial Services. I met Shannon and gained a stepson (Trevor) and a newly born daughter (Brooke). I watched them tear down Central Park Mall. I watched my dog die from a honey bee attack. I had knee surgery. I was laid off and within three days gained a better job at PEC.

In life, much passes by without much thought. My time with SAABE has enabled me to be humbled by the world and its plans for me. I am glad that part of the plan the Lord had for me was to spend four of my best years as President of SAABE.

A special thanks to Laura Bray for being my dear friend and helping me with tough decisions and making it fun to be a part of the board. Laura does not do this for free, but I will tell you we get more than our money's worth with her services. I would like to also thank my dear friends Jock Tilghman and Rhondo Jauer. They may not know it, but when I worked with them at Transwestern, they gave me encouragement to accept the nomination.

I really miss working with all my SAABE brothers and sisters in San Antonio and I will dearly miss being your president. God bless SAABE and all its members. ❖

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December Meeting Summary

by Kendal Langenberg

The December general membership luncheon was indeed a bitter-sweet time! We bid a sad farewell to outgoing president Bob Beal and excitedly welcomed incoming president Charlie Mikolajczyk. For those who missed the lunch, you truly missed out on an emotional and important piece of SAABE history!

Being our annual holiday lunch, we traditionally do not have a speaker in December. However, this year we had many speakers—the SAABE board members! Each board member gave a summary of what has happened in his area of responsibility during the past year, as well as goals for the coming year. There was one constant theme in all of these presentations: we need more help! It can be as simple as using your contacts to bring more members into SAABE, or as in-depth as being willing to head up a committee. The bottom line: we need your assistance and involvement! Let's all do our part to keep SAABE growing and relevant.



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We also held elections for each board position that was "up for grabs" this year. Congratulations to Charlie (president), Tom Lasater (1st VP), Allen Mangrum (vendor rep), and JR Uresti (treasurer) for being elected to two-year terms. If you have any suggestions for our organization, see these men (or any board member) and make your request known!

We would also like to extend a BIG THANK YOU to Bob Beal one more time for his wonderful and profound impact on SAABE over the past four years!!! Our organization is indeed better, Bob, as a result of your leadership! Thanks so much for your willingness to lead us! All of the warm comments you shared in your speech at the lunch are certainly mutual from the organization. You da man!

If you have not been regular in your attendance to the monthly lunches lately, make it a New Year's Resolution to make every SAABE lunch in 2007. Get the new year started on the right foot by being at our next luncheon on January 17. Don't miss the first lunch under the new Charlie Regime! ❖

Tech Talk #113: Water-Cooled Condensers

by The Charlie

As the name implies, water-cooled condensers use water as the cooling medium. Water passing through the condenser absorbs heat from the refrigerant vapor, and as the water leaves the condenser it carries the heat away with it.

Shell and Tube Condensers

The double-pipe condenser is an efficient type of condenser because it provides relatively high velocities for both refrigerant and water. This gives good heat transfer because of scrubbing action on the walls of the pipe or tubing. However, in large capacities, a double-pipe system would take up about the size of a desk for about 10-tons. In a shell and tube condenser where the high pressure refrigerant vapor enters the top of the shell, it makes high capacities possible in a comparatively small piece of equipment. This type of condenser contains a number of straight tubes through which the cooling water is circulated. Most of your chillers have this type of condenser. The hot gas or vapor comes into contact with the cool tubes, and this de-superheats and condenses the refrigerant. Upon condensing, the liquid refrigerant trickles down over the tubes and falls to the bottom of the shell. The lower portion of the shell forms a reservoir, or receiver, where the liquid refrigerant is stored until it is needed in the evaporator.

When the condenser is operating properly, liquid refrigerant trickles over the tubes, and the liquid becomes sub cooled because the cooling water removes the sensible heat from the liquid refrigerant. Additionally, sub cooling usually takes place because the lower runs of water tubing usually pass through liquid refrigerant as it lies in the power portion of the condenser shell. Typically, the ends of these tubes are fastened into plates, called tube sheets. The tube sheets are then covered with removable heads, or return boxes/water boxes. The water tubes may then be cleaned/inspected by removing these heads/boxes.

Shell and Coil Condensers

The shell and coil type condenser is similar in principle to the above except that, instead of being straight, the tubes are formed into one or more coils. This type of condenser costs less to manufacture and it also reduces the amount of strain as encountered with the shell and tube. The tubes will expand and contract with changes in temperature, and when the tubes are straight as in the shell and tube condenser, considerable strain is put on the tube sheets and this can lead to leakage. The tubes in a shell and coil condenser reduce this problem because the coiled tubing is free to spring as it expands or contracts. However, the down-side to the shell and coil condenser is that it can not be cleaned by mechanical means; it must be cleaned with chemicals.

Troubleshooting

About the only issue with a condenser is excessive pressure or high head pressure. Understanding high head pressure is essential if you are to develop the ability to

troubleshoot water cooled condensers which are not operating up to their rated capacity. This is especially important with large tonnage condensers since an incorrect diagnosis may cause unnecessary down time and costly repairs which could otherwise be avoided.

Condenser approach temperature is a term which illustrates the relationship between water flow and the rate of heat transfer. It is defined as being the temperature difference between the condensers leaving fluids. The slower the cooling water travels through the condenser, the longer the water remains in the condenser, and the more closely its leaving temperature "approaches" the condensing temperature of the refrigerant. This reading is important because it will help you visualize and distinguish between several different causes of condenser capacity reduction.

If the approach temperature difference were to increase, the reason could be dirty condenser tubes. Conversely, if the approach decreases, the cause could be the result of reduced condenser water flow. High head pressure would result from either one of these two very different conditions. Understanding these relationships will not easily fool a technician/mechanic into thinking that the tubes are dirty when actually, the tower pump strainer is fouled.

Some of the causes of high head pressure are; (a) dirty condenser tubes, (b) insufficient water flow through the condenser, (c) air and noncondensables in the condenser, and (d) an overcharge of refrigerant.

Rather than exhaust myself of other condenser issues, just remember some key points. A machine well taken care of will reciprocate with you (no pun intended), a "tight" machine is a good machine, condensers that are cleaned twice a year are happy condensers, a tube can go from no defects to a leaking tube in a shorter time than you can ever imagine...eddy current, eddy current, eddy current!

Next Month: I do have not a clue but if you give me five minutes of your time...I'll teach you everything I know ;-)

CHARLIE'S LAW: Today's decisions are much like Jalapeño's...what you do today will more than likely burn you tomorrow!

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Communications Check-Up[®]

by Laura Bray

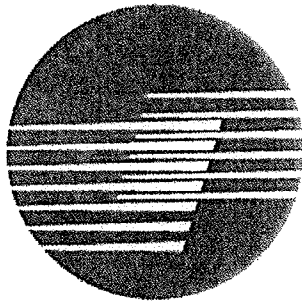
Effective Networking

Networking isn't just for "sales guys." Building a professional network provides you a ready source of resources to draw on when you're trying to hire someone (or find another job for yourself), solve a problem, or meet a new supplier. Here are some tips on how to network effectively:

- **Ask What the Other Person Does First:** Rather than launching into a long speech about your own needs after you introduce yourself, ask the other person what he/she does. Everyone likes to talk about themselves.
- **Have Your Business Card or Contact Information Handy:** If your company doesn't provide business cards, make your own. Office supply stores have plenty of business card templates to print from your PC. Make sure your card includes name, title, company, phone number, and email address.
- **Jot Down Notes on the Back of His/Her Business Card:** If you just take the cards back to your office and toss them in your inbox, there's no way you'll remember your conversation when you find the cards again two weeks later.
- **Refer Someone Useful to the Person You Just Met:** Say, for example, your new acquaintance complains about their mechanical contractor. Give them the name and number of one you can recommend. This helps the new person remember you favorably.
- **Attend Meetings and Intentionally Plan to Meet at Least Two New People:** SAABE meetings regularly attract 60 or more attendees. You almost certainly don't know all of them. Make it a point to introduce yourself to two new people at the meeting and find out more about what they do.

Next month: What *Not* to Do at a Meeting ❖

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First and second Thursday of each month

One Oak Park, 1020 NE Loop 410

We gather as a group of interested individuals from all levels of building maintenance to review areas that participants have studied individually. An area to eat and review textbook materials is provided in the One Oak Park building conference room.

We also visit sites whereas we can practice and illustrate the many different components that we commonly test, measure, and record the operating parameters of each piece of equipment that we have studied (a hands-on approach). Vendor experts may teach some chapters, so our group can benefit from the many years of experience that our vendors bring to this "hands-on" classroom study group.

We invite all maintenance personnel to come see the continuing education/training SAABE is pursuing to further enhance the skill levels of your engineering staff.

SMT (Systems Maintenance Technician Program)

- 1) Refrigeration Systems and Accessories (completed January 2007)
- 2) Air Handling, Water Treatment, and Plumbing Systems
- 3) Electrical Systems and Illumination
- 4) Boilers, Heating Systems, Applied Mathematics
- 5) Energy Management and Controls

The application fee for the BOMI SMT Program is \$175 (covers all five courses). The application fee for individual courses is \$75 each. Individual course material textbooks are \$425. SAABE also has a scholarship program for those in need (see page 3 for details).

In February, we start our next text, "Air Handling, Water Treatment, and Plumbing Systems."

For additional information contact Doug Graves (828-7712) or Tom Lasater (771-5824). ❖

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CBE and Scholarship Applications Online

You can now download an application for the Certified Building Engineer and Scholarship programs on SAABE's web site at www.saabe.org

Engineer Spotlight

by Jeff Turov

Tom Ready

Facilities Manager
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- **How long in the building engineer trade?**

Tom has been involved in the building engineering trade for 24 years. In the beginning he worked for Great America, a residential property management company. From there he moved to Trammel Crow, Garcia Property Management, Reata, and now HealthCare Realty Trust, where he oversees four separate medical properties. Tom has been a member of SAABE for two years.



- **Any awards, recognition, or special training?**

Tom currently holds the Master Municipal HVAC license, is refrigerant certified, and earned an Associate's Degree from St. Phillips college, where he served on the student advisory board for two years.

- **Hobbies/what do you enjoy during off-hours?**

Tom is an avid boater and enjoys nothing more than to get out on Canyon Lake with his boating friends and tie their boats together and watch the world go by in the hot summer sun. He also enjoys hunting and tinkering with technology. His friends call him "the gadget guy."

- **Family/Children?**

His two daughters are grown and have left the nest. He is a grandfather once over with the second on the way.

- **Advice you would share with those just entering the trade?**

Learn everything you can about the business—the more you know the more valuable you are.

- **What would you like to see from SAABE in the future?**

Back when Tom first joined SAABE, he recalls that the luncheons used to be more of a think-tank affair, where engineers would share problems to the group and get a response from the membership. He would like to see us go back to that at each luncheon where the engineers can learn more from each other and not just from the monthly speaker.

- **Any interesting stories from your years in the business?**

In the flood of 1998, Tom was working at the Mercantile building. He remembers riding down on the elevator to the basement, and before it reached its landing, he heard it splash. Right then he knew something was amiss. ❖

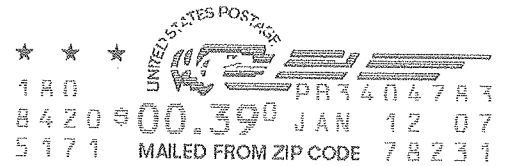
Job Opening

The following job opening is currently listed on the SAABE website (www.saabe.org). Visit the site for full details. If you have job openings, please forward them to laurabray@braycommunications.com for posting.

Assistant Chief Engineer: Travis Commercial Real Estate Services has an opening for an Assistant Chief Engineer for the Texas Center for Athletes Medical Office Building. The building is located off of Floyd Curl in the Medical Center. Required experience includes a minimum of five years building maintenance experience, experience with chillers, cooling towers, energy management systems, boilers, variable air volume cooling/heating systems, domestic water pumps, fire alarm and sprinkler systems. Please send resumes to rraddatz@traviscommercial.com, or fax to 210-558-6243. ❖



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SAABE TIMES
January Issue

Final Thought:

"The worst thing about the miracle of modern communications is the Pavlovian pressure it places upon everyone to communicate whenever a bell rings."
 — Russell Baker

2007 Board of Directors

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Bob Beal Past President	830-868-4749
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Laura Bray Association Manager (laurabray@braycommunications.com)	408-1699

Membership Luncheon
Wednesday, January 17, 2006

Time: 11:30 a.m.

Location: Alamo Cafe on 281
CPS Energy Business Programs and Rebates
Sponsored by CPS Energy

Upcoming Program:
Wednesday, February 21

The SAABE Times is edited by Laura Bray and printed monthly for the San Antonio Association of Building Engineers by:



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