

SAABE TIMES

A publication of the San Antonio Association of Building Engineers

December 2006

Mark Your Calendar—

JOIN US FOR OUR DECEMBER LUNCHEON

The next General Membership Meeting of the San Antonio Association of Building Engineers is set for 11:30 am on Wednesday, December 20 at the Alamo Cafe on 281 (just north of Bitters). This month, we'll hear from the SAABE board about the status of the organization, and the membership will elect its 2007 Board of Directors.

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, December 19. PLEASE RSVP so we can be sure to have enough meals on hand!

We hope to see you there! ❖

Nomination Deadline Approaching for the 2006 Building Engineer of the Year

The San Antonio Association of Building Engineers invites you to nominate your/a Building Engineer for the 2006 SAABE BEOTY Award. This prestigious award exemplifies an engineer's achievements and dedication during the past 12-to-16-month period as related to the building industry.

To nominate a Building Engineer, simply send a letter with your name and contact information, the candidate's name and contact information, and what contributions he/she has made during the past 12-to-16 months that makes this candidate deserving of the award. You can also include information such as training or award certificates, tenant letters, or other materials to support the nomination. The individual must be a member in good standing with SAABE. We encourage you to nominate outstanding assistant engineers for this award, also. Some of the evaluation criteria include:

- Participation in SAABE events and meetings
- Recent continuing education
- Major projects in the past 12-16 months
- Employee training
- Tenant & owner/manager evaluation letters
- Safety record
- Community participation

Send nominations to SAABE (address on page 8). Please call the SAABE office if you have any questions.

**DEADLINE FOR
NOMINATIONS:
FRIDAY, DECEMBER 15, 2006**

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

A Message from the President

by Bob Beal

Well, it is almost time for your current President to ride off into the sunset. My second term is coming to an unavoidable end. By January's meeting, there will be a new President holding the reins. At the December luncheon, you will be asked to vote on the lucky nominees. I really would like you to think about who you would like to lead you through the next couple of years. It is not really a hard job for someone who has a vision, people skills, and the skills to lead the Board during trying and difficult times. Please try to make the next three luncheons, because a lot is on the agenda (including BEOTY).

What SAABE Has Meant To Me

If you know me, you also know that I have lived a very busy life. In the past, I have not only been an engineer, but I am also a working musician (sometimes four nights a week). I own a Harley Davidson, I have a recording studio, I am a father, and I am into whatever the hobby of the month may be. As an American male, I can say I have experienced a fulfilling life. I am a new father, and that has turned out to be number one to this date. Being nominated and elected as President of SAABE has been a close second or third. I would not have been up to the task if this had been the 90s. I have always been humbled by the knowledge of my fellow engineers, and sometimes, I was a little nervous even being in their presence. When I was nominated for the Presidency, I was not sure if I was qualified to serve. I said if I was going to do it, I was going to dedicate what ever time I needed to be as good as I could be.

With the overwhelming support of the board and the members, I took it on and am glad to say that it has been the pinnacle of my working life. SAABE has taught me to be less of a pessimist and more of an optimist when it came to the so-called day-in and day-out problems. SAABE helped me land the job I have now. My relationship with my vendors is better than ever, and most of them will help me out with info any time I call on them. My confidence in solving maintenance issues is 100% improved because I have 200 members to call and ask a stupid question. I was able to get involved with code change issues in San Antonio and learned a great deal about city politics. I have been able to help others with their careers and have helped people find jobs. I have become a better listener and have been a better person all together.

Along with others, I have taken a vision of what I felt SAABE should be and made it reality by streamlining and refurbishing the vision of past leaders. I have now a great deal of respect for the people whose time and effort may have been taken for granted in the past. A few that come to mind are Charlie for his "Tech Talk" articles, Laura Bray's organizational skills, and Doug Graves and Tom Lasater for their "never say die" attitude when it comes to the programs they are involved with. I will dearly miss being President but I am looking forward in taking my SAABE involvement to the next level. God bless SAABE and all its members. ♦

Welcome New Members

Please add the following names to your membership directory:

Joe Flores
Trammell Crow/Pacific Plaza
14100 San Pedro
San Antonio, TX 78232
210-366-9311

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. ♦

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Apply for the SAABE Scholarship/Educational Assistance Program

SAABE now offers a program to provide scholarships and educational assistance to SAABE members for participation in courses related to property maintenance (especially SMT/SMA* programs offered by the BOMI Institute).

Applicants must be regular members of SAABE and hold a position in the field of building maintenance. The place of business must be within the San Antonio geographical area. Applicants must have long-term career plans in building engineering/maintenance and must have at least two years of experience in the field. Applicants are responsible for a portion of the cost of any course.

For full details, rules, and an application, visit the SAABE website at www.saabe.org. ❖

* Systems Maintenance Technician and Systems Maintenance Administrator

November Meeting Summary by Kendal Langenberg

We had a *wonderful* November general membership luncheon at the Alamo Café! Great food, great speaker, great camaraderie! What more can you ask for?!

Tom Lasater (filling in for the fearless—but absent—Bob Beal) got things rolling with an announcement that our total membership count is up to 211! “Way to go” to all of us on building a top-notch organization that is still growing! Tom also mentioned the details on our BOMA/SAABE trade show that is coming up on May 24, 2007. Be sure to make plans now to be a part of this fun and enjoyable event!

Our speaker for the lunch was John Cook with Mechanical Reps. As one who lives, breathes, and dreams about variable frequency drives, he gave us quite the informative and passionate presentation on how and why they work, while demonstrating the quick payback and easily-justified expense of having them installed in our buildings. A big thank you again goes out to John for sponsoring the lunch and speaking to us on a very applicable subject!

Finally, we would like to again charge each and every member to be a fully-functioning participant in our organization! There are still needs on various committees, and we need YOU! Please consider how or where you can help. We have not been known to turn anybody away. ☺

Be sure to be at the next luncheon, which will be on December 20. Whenever you miss a SAABE lunch, you miss out on something fantastic! ❖

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RSVPs are Important!

Please RSVP if you plan to attend the monthly luncheon. RSVPs are very important – they let us know how many meals to order! ❖



Tech Talk #112: Condensers and How They Work

by The Charlie

Purpose

The purpose of the condenser is that liquid refrigerant goes into the evaporator and there it is boiled into a vapor. In order to be able to use the same refrigerant over again in the evaporator, the refrigerant vapor has to be turned into a liquid. The purpose of the condenser is to basically remove enough heat from the refrigerant vapor so that it will condense to a liquid, ready for use again in the evaporator.

We pointed out in the past articles that refrigerant vapor leaving the evaporator is colder than the water or air that is ordinarily available for use in a condenser. Therefore, heat can not flow from the refrigerant vapor, in the cold condition at which it leaves the evaporator, to the warmer water or air.

The purpose of the compressor is to raise the pressure of the refrigerant vapor. As the pressure of the vapor is raised, the boiling point of the refrigerant is raised. If the compressor raises the refrigerant pressure high enough so that the corresponding boiling point is higher than the temperature of the condenser water or air, the flow of heat from the refrigerant can be sufficient to cool the refrigerant to a temperature lower than its boiling point at that pressure, causing it to condense into a liquid.

Although the pressure throughout the condenser is relatively constant, the refrigerant's temperature varies as it travels through the condenser. In a typical condensing process the refrigerant within the condenser will, in turn, exist as superheated vapor, a saturated liquid and sub-cooled liquid, depending upon its location within the condenser. It is also desirable for the refrigerant vapor to be superheated as it leaves the evaporator and enters the compressor. Also, the compressor does work on the vapor and the resulting addition of the heat of compression adds a considerable amount of superheat.

As this superheated vapor enters the condenser and is cooled, the first action is that all of the superheat is removed. Next, the latent heat of vaporization is removed as the vapor condenses into a liquid. As brought up earlier, the sub-cooling of the liquid refrigerant is desirable to increase the efficiency of the refrigeration system. To do this, the condenser must have enough heat removing ability to additional heat from the condensed liquid to cool it to a temperature that is lower than the temperature which corresponds to the condensing pressure.

All of the heat which the condenser removes from the refrigerant passed to the cooling water or air. The quantity of this heat removed is therefore rejected from the refrigeration system as the water or air leaves the condenser.

Condenser Capacity

Condenser capacity is the ability of a condenser to transfer heat from the refrigerant to water (in the case of a water-cooled unit), or to air in the case of an air-cooled condenser. Condenser capacities depend upon the following factors:

1. The physical size of the condenser as it relates to the amount of surface provided, through which heat can flow from the refrigerant to the cooling water or air. Fins, plates, wires may be connected to the refrigerant tubing to increase the surface area.
2. Velocity of refrigerant, and water or air, over the heat exchanging surface. The higher the velocity the greater the heat flow. Pumps, fans, or baffles within a condenser may be used to increase velocities.
3. The condition of the heat-exchange surfaces as to cleanliness and freedom from rust, scale, dirt, or anything that could act as insulation to retard the flow of heat.
4. The temperature differences that exist. The greater the temperature difference, the greater will be the capacity of the condenser.

In order to avoid the need for a condenser that is reasonably large and therefore costly, and so not to require unreasonably large quantities of water or air, the condensing temperature "should" be at least 15 – 20 degrees higher than the temperature of the entering water or air. This temperature difference is sometimes referred to as the temperature split of the condenser

Next Month: Water-Cooled Condensers

CHARLIE'S LAW: Real men *still* don't read the instructions!

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Communications Check-Up[®]

by Laura Bray

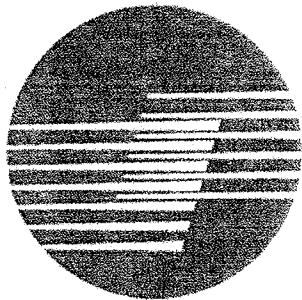
Running Effective Meetings

No one wants to waste time at a poorly run meeting. Follow these guidelines for effective meetings:

- **Write an Agenda:** List the topics to be discussed (and the time allowed for each) and distribute it prior to the meeting. This allows participants to prepare their thoughts and input prior to the meeting.
- **Come Prepared:** Send handouts or supplemental materials to participants prior to the meeting. Ask that they review the materials before attending, so no one is reading during valuable meeting time.
- **Stick to the Allotted Time:** Respect everyone's time. Start and end the meeting when you say you will. Choose someone to watch the clock to let you know when the allotted time is almost up for each topic, so you can bring the discussion to a close.
- **Encourage Participation:** As meeting leader, it's your job to obtain input from everyone. If someone has nothing to contribute, why was he asked to attend? Make sure everyone has a chance to provide input.
- **Stay on Topic:** Sometimes a discussion can go off on a tangent. Without being rude, steer the conversation back to the topic at hand. If the tangent is important, put the item on a "parking lot" list to discuss at a future time.
- **Record Action Items and Follow Up:** Assign someone to record action items and distribute the list to participants after the meeting. Then commit to following up on all action items prior to the next meeting.

Next month: Effective Networking ❖

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11:30 am–12:30 pm (sometimes 1:00 pm)

Bring your own lunch

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 where 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)

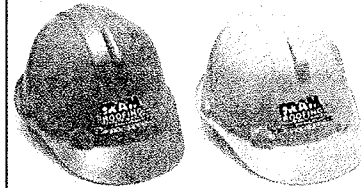
- 1) Refrigeration Systems and Accessories (completed January 2007)
- 2) Air Handling, Water Treatment, and Plumbing Systems
- 3) Electrical Systems and Illumination
- 4) Boilers, Heating Systems, Applied Mathematics
- 5) Energy Management and Controls

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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SAABE Seeks Nominees for 2007 Board of Directors

Every December, SAABE members elect four directors to serve a two-year term on the board. This year, the membership will be electing candidates for the following positions:

- President
- 1st Vice-President
- Treasurer
- Vendor Representative

If you're interested in serving on the SAABE board, contact any board member or Association Manager Laura Bray. We'd be happy to explain the time commitments and duties. It's a great way to get involved and keep your association vibrant and growing! ❖

Engineer Spotlight

by Jeff Turov

Howard Newsome

Trammell Crow Company
601 NW Loop 410, Suite 250
San Antonio, TX 78216
Phone: 210-524-9441
e-mail: hnewsome@trammellcrow.com

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

Howard has been employed as a building engineer for twelve years. In that time he has worked for only one company—Trammell Crow. He has, however, been the engineer of record at numerous buildings around town, such as San Pedro Plaza, Kelly Bank Building, One International Centre, City View, Century Plaza, Brookhollow, and Broadview. All benefited from Howard's technical expertise.

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



The achievement that Howard is most proud of is receiving the 2005 Building of the Year award from the San Antonio Association of Building Engineers. He was also recognized as the Trammell Crow employee of the year in 2004 and currently holds Maintenance Electrical Technician's license from the State of Texas. Howard has also earned an Associates Degree

in air conditioning and refrigeration.

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

In his spare time Howard enjoys spending time with his wife and daughter. His hobbies include hunting, fishing, and waterskiing on what used to be Medina Lake.

- **What did winning BEOTY mean to you?**

To date winning this award has been the high point of Howard's career. Just being recognized by his peers for his work and accomplishments has given Howard a pride that he puts back in to his work everyday. He truly enjoys his work and it shows.

- **In your twelve years as a SAABE member, what have you enjoyed most?**

Howard has enjoyed establishing the many relationships he has made of the years and feels like the membership of SAABE is more like a family than an organization. These members are willing to teach you what they know and to share what they have to help you in your career.

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

Don't be afraid to ask questions of your peers; stick with it and have fun. This is an exciting career as you never know what you are going to do next. Think while you work and never compromise safety. ❖

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.

Chief Engineer: Cambridge Professional Services may be looking for a Chief Engineer for a downtown Class A high rise office building. Required experience includes a minimum of ten years of high rise office building maintenance experience, extensive experience with chillers, cooling towers, energy management systems, boilers, variable air volume cooling/heating systems, domestic water pumps, fire alarm and sprinkler systems. CFC handling certificate and COSA maintenance license required. Please contact Nancy Russell at 299-1172 ext. 221, nrussell@cambridgerealty.com, or fax your resume to 299-1243. ❖



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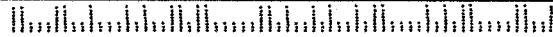
CELEBRATING
20 YEARS
 OF EXCELLENCE IN
 BUILDING ENGINEERING

SAABE TIMES
December Issue

Final Thought:

"The only difference between the big shot and the little shot is the big shot is just a little shot who kept shooting." — Zig Ziglar

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2006 Board of Directors

Bob Beal President	830-868-4749
Tom Lasater 1st Vice President	771-5824
Mike Halvorsen, CBE-M 2nd Vice President	979-8002
Kendal Langenberg Secretary	967-8766
JR Uresti Treasurer/SABOMA Representative	495-2195
Jock Tilghman, CBE-J Education Director	681-2494
Allen Mangrum Vendor Representative	412-1095
Elena Castillo Past President	822-8570
<hr/>	
Laura Bray Association Manager (laurabray@braycommunications.com)	408-1699

Membership Luncheon
Wednesday, December 20, 2006

Time: 11:30 a.m.

Location: Alamo Cafe on 281
Annual Business Meeting and Board Elections

Upcoming Program:
Wednesday, January 17

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



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