



SAABE TIMES

A publication of the San Antonio Association of Building Engineers

August 2006

Mark Your Calendar—

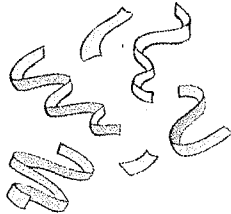
JOIN US FOR OUR AUGUST LUNCHEON

The next General Membership Meeting of the San Antonio Association of Building Engineers is set for 11:30 am on Wednesday, August 16 at the Alamo Cafe on 281 (just north of Bitters). This month's meeting is sponsored by Voss Lighting. The topic is "Epack Legislation and How It Affects Property Lighting Upgrades." Speakers are Kendal Langenberg, Bryan Lesch, and Brady Cowan. We'll also have a special celebration to recognize the milestone of 200 members!

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, August 15. PLEASE RSVP so we can be sure to have enough meals on hand!

We hope to see you there! ♦



SAABE Reaches Milestone of 200 Members!

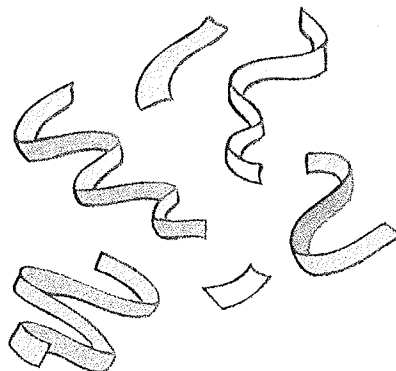
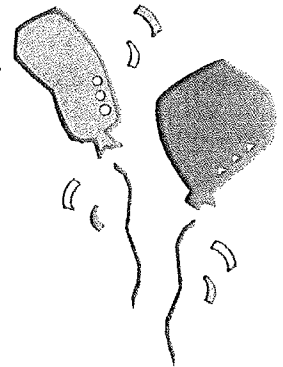
In July, SAABE reached a long-held goal of signing up its 200th member!

Many of you have worked long and hard to spread the word about SAABE and the benefits of membership. Engineers and vendors alike recognize SAABE as an excellent investment of their time and money. In addition to the education at monthly meetings and seminars, the networking is unsurpassed! We've even topped the 100-attendee level at one of our membership meetings this year!

Here's a history of membership growth over the last four years:

- 2005: 185
- 2004: 177
- 2003: 161

At our August meeting, we'll have a special celebration for this milestone, so we hope you can join us. Many thanks to all of you for your support of SAABE and for letting others know about the benefits of membership! On to 250! ♦



A Message from the President

by Bob Beal

As a chief or an assistant, at some point you are going to have to present or explain an idea, a proposal or expense to your boss. For most of us, it usually is a verbal conversation mixed with some paperwork back-up. To others, it may be in the form of a PowerPoint or some other kind of computer-based presentation. No matter what your form, some basic rules come to mind when making a presentation.

Factual accuracy is a must. If you are asking for something, then you must be ready to explain why you need it. Be sure your facts are accurate. If the product or idea is a time and money saver, you will need to have something on paper to visually back up the data. If what you're asking for is expensive, then you can bet your boss is going to check the facts you provide him.

Timing is very important. For example *we all know that we need to fix heating problems in late summer before it gets cold*. It is often hard to convince some folks to repair heating problems in the summer. Pick a time to pitch your ideas when that person has the mindset to listen.

When presenting something, you need to be able to talk about the alternatives while still remaining firm on what you think is the best solution. Being on the fence during a presentation will only leave your audience confused.

If you are just starting out on computer communications I think it is a great idea to take a PowerPoint class. I have used PowerPoint for some time, but I took a refresher class and learned more about the little things that can make or break a presentation. In class I was reminded about an old but important rule that is true with any presentation. Do not allow the information to be the presenter. You should always make sure you are the presenter and your information is the back-up for the facts. Too much information or automation on any slide of PowerPoint will only confuse the eyes, not allowing the audience to absorb the information. So make it cool but not too cool.

When choosing fonts, borders and word art, leave the fancy stuff for celebrations and fun presentations. If you're trying to sell an idea or product using PowerPoint, be sure to use fonts, borders and word art that are appropriate for the presentation. Too many wavy and 3-D words are not good when being serious.

OK, let's assume you have the facts, good timing, and good backup. I suggest you make dry runs by physically performing them. If you do not have that option, then perform them over and over mentally. In any case you will have a better presentation.

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Building Engineer of the Year

It is time to put together your BEOTY info and get in the nominations. We want to get started a little earlier this year. We can take nominations at this time. Information gathering like tenant letters and pictures can be delivered as late as early December. ❖

Welcome New Members

Please add the following names to your membership directory:

Jade Chang
American Asphalt
119 Blue Star
210-372-3090
San Antonio, TX 78204
jade.chang@americanasphalt.net

Robert Reeder
Power Tech
142 W. Rhapsody, Ste 2
San Antonio, TX 78216
210-308-6622
powertechsa@satx.rr.com

Frederick Beebe
CPS Energy
PO Box 1771
210-353-2717
San Antonio, TX 78296
fbbeebe@cpsenergy.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. ❖



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

Education Corner

SAABE Last Thursday Training Seminar

- High Performance Airflow Measurement Systems, sponsored by Holland Equipment Company and Ebtron
- Thursday, August 31, 11:30am–1:00pm, SAWS (2800 Hwy 281 N), building two, room 145 (Lunch provided)
- Whether you're measuring outside airflow for ASHRAE Standard 62 compliance, tracking supply and return airflow rates, or controlling pressurization, high performance airflow measurement systems will provide you with the most accurate and repeatable measurement available in today's HVAC marketplace.
- RSVP to Laura Bray, 408-1699

SAABE BOMI Discussion/Action Group

- Every first and second Thursday at One Oak Park (1020 NE Loop 410), 11:30am–1:00pm
- Led by Tom Lasater.
- Free to SAABE members. Bring a sack lunch.

Ethics is Good Business

- August 24, CPA Foundation Classroom
- Skills and credentials to show you're "on the level"
- Cost: \$175
- Sponsored by SABOMA
- Call 830-981-5223 to register

Contact Laura Bray (408-1699) if you know of other courses or events. ❖

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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

Tech Talk #108: Compressors 101

by The Charlie

The compressor in a refrigeration system is actually a pump. Its primary function in the vapor compression cycle is to raise the pressure of the refrigerant vapor. It must raise this pressure to a level high enough so that the temperature of the saturated vapor is higher than the temperature of the cooling medium available for condensing the refrigerant vapor. The compressor also performs the function of removing refrigerant vapor from the evaporator, which reduces the pressure in the evaporator so that the desired temperature can be maintained.

Generally, this machine must be driven by a power source and a motor or engine. The term compressor is taken to mean the complete unit consisting of the compressor itself and the motor that drives it. The term motor-compressor is often used to designate a unit whereas the motor and the compressor are built together in an integral unit, such as the hermetic machines I'll try to describe later. A condensing unit consists of the compressor and motor, and the condenser.

There are a number of types of compressors.

Rotary Compressor

This type of compressor is used in domestic refrigerators and freezers, being relatively free of vibration and therefore being suited for direct motor drive. Large rotary compressors are used on low temp work such as storage plants, freezing plants, and industrial processes. In applications where very low evaporator temperatures are required, several compressors are used in stages and the large rotary can be used as the low stage, or the boost compressor. The discharge of the booster is connected to the suction of the second stage. A low evaporator pressure is necessary in order to have a low evaporator temperature, and at low pressure the refrigerant expands and its volume becomes quite large. Rotary compressors are suitable for this application because they can handle large volumes of vapor.

Rotary compressors are positive displacement machines, even though the only valve is a discharge check valve. Displacement is accomplished by means of sliding vanes or blades. These vanes, which may or may not be spring-loaded, seal against an offset cylinder in the case, or against a rolling piston. As the rotor turns, the gas is compressed and forced out through the discharge port. At the same time, the suction vapor is flowing into the cylinder.

Centrifugal Compressor

This type of compressor contains a rotor (or multiple sets of rotors), the rotation of which throws the refrigerant vapor from the center of the rotor outward. It develops pressure in the same manner as a centrifugal water pump. Centrifugal compressors are essentially high-speed high-capacity machines, used in large water chilling machines. More to come on centrifugal compressors later down the road.

Helical-Rotary/Screw Compressor

This type has two screw-type impellers that turn against one another much like the blower on a Detroit diesel engine,

and they are a positive displacement type. These compressors are also used on water chilling machines and are intended to operate at constant speed, and capacity reduction can be obtained by automatically positioning a sliding valve located within the rotor casing. Gradual opening of this valve allows increasing quantities of suction gas to pass out the casing and back into the compressor inlet before being compressed. This reduces the amount of refrigerant pumped and correspondingly reduces compressor capacity.

Reciprocating Compressor

This type of compressor has automotive style pistons, which compress the refrigerant gas as the pistons travel back and forth, and the valves to control the flow of gas into and out of the compressor. More on these later.

Scroll Compressors

These compressors offer residential and commercial users many benefits of reliability, efficiency, and energy conservation. Simplicity in the application, design and use of the scroll allow it to operate efficiently with fewer parts than some other type compressors. There are two intermeshing involutes (for lack of a better description), and are referred to as the scroll members. One scroll is fixed, the other orbits. In each revolution or orbit, vapor enters the compressor through two openings or intakes. The pressurized vapor is discharged through one discharge port. The refrigerant travels approximately 540 degrees from where it enters the scroll to where it exits. Compression occurs simultaneously in several crescent shaped pockets, which allow very smooth operation. Because the scroll has no dynamic valves, either suction or discharge, the compressor is for all practical reasons, 100% volumetric efficient. However, always remember that a scroll compressor is a vapor compressor and not a liquid pump!

Next Month: Recip Compressors 101

CHARLIE'S LAW: If the Professor on Gilligan's Island could make a radio out of a coconut...why couldn't he fix a hole in a boat?

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Communications Check-Up[®]

by Laura Bray

Commonly Misused Words

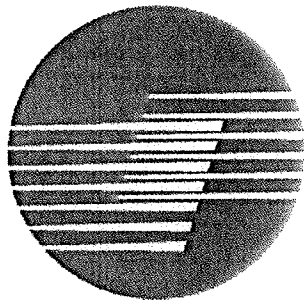
The English language is full of words that cause no end of confusion. Here are some common ones:

- *Flammable*: The common word meaning "combustible" is *inflammable*. But some people are thrown off by the *in-* and think *inflammable* means "not combustible." For this reason, trucks carrying gasoline or explosives are now marked *flammable*. The proper use of the word is *inflammable*.
- *Nauseous* and *Nauseated*: The first means "sickening to contemplate"; the second means "sick at the stomach." Do not, therefore, say "I feel nauseous," unless you are sure you have that effect on others.
- *Accept* and *Except*: The first means "to receive willingly" ("*I accept this gift.*") The second has two meanings. One implies exclusion ("*open every day except Sunday*"); the other meaning is "unless" ("*you face punishment except if you repent*").
- *Bought* and *Brought*: The first means a purchase ("*I bought a shirt.*") The second means to bring something ("*I brought the shirt home.*")

Source: "The Elements of Style," William Strunk, Jr., and E.B. White; the Purdue University Online Writing Lab

Next month: Interviewing Skills ❖

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July Meeting Summary

by Kendal Langenberg

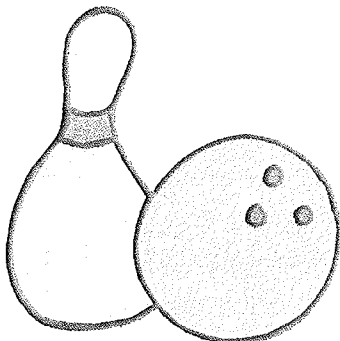
The July edition of the SAABE general membership luncheon was indeed a beneficial session to all in attendance! Special thanks go out to Cyndi Mergele, of Padgett Stratemann, for an excellent and very practical presentation! The title of Cyndi's presentation was "Tough Discussions; Successful Outcomes," and she basically covered the subject of how to ask for a raise. MANY great ideas and helpful reminders were provided by Cyndi, who has over twenty years of experience in the human resources field. If you missed the lunch, or didn't get a copy of the notes while there, you'll want to request a copy from Laura. Thanks again, Cyndi, for the giving of your time, and for the wisdom that you shared with us!

As mentioned at the meeting, the board has begun exploring the concept of a mentoring program for the building engineer trade. We already have received positive feedback on this subject from several school districts and at least one college. Here's where all of you come in: we need "a few good men" (or women) to be devoted to this in order for it to take off and become a reality! Please see Laura or any of the board members if you would like to volunteer on this committee. We need YOU!

Are You A Bowler?

Once again, SAABE will field a team at the annual IREM Bowling Tournament on Friday, September 22 from 3:00-6:00pm at Country Lanes. So far, our team includes JR Uresti, Charlie Mikolaczyk, and Jeff Turov. We need one more bowler! Participants receive bowling shoe rental, drink and raffle tickets, a large bucket of popcorn, and a pitcher of soda.

Last year, the SAABE team took top honors at the tournament. Please call Laura Bray if you'd like to participate! ❖



There is also an opportunity for committee assistance with organizing Last Thursday Training Seminars. See Allen Mangrum to volunteer or to get any information on sponsoring one of these fine events at your facility. And vendors, there are many other ways to get your name out, too! Ask any of the board members how you can avail yourself of taking advantage of the many avenues of advertising/marketing within SAABE.

Needless to say, there's a lot going on these days with our organization! Be sure to read the newsletter, check the website, and of course, attend the monthly luncheon to stay up-to-date with all that is happening. Let's all do our part to keep SAABE fresh and vibrant. Look for ways to get involved today!

Our next luncheon is set for Wednesday, August 16. See all y'all there. ❖

A large advertisement for American Asphalt. The background is a dark, textured pattern. On the left, the word "PAVING" is written vertically in large, white, block letters. In the center, there is a large rectangular image showing a construction site with a paving machine and a worker. Below this image, the text "AMERICAN ASPHALT" is written in a bold, sans-serif font. To the right of the main image, there is a vertical column of smaller images showing various paving and repair work. Below the main image, the text "Commercial & Residential" is written in a smaller font. At the bottom right, the text "AMERICAN ASPHALT (210) 372-3090 1-888 Pavement Fax (866) 827-8062" is displayed in a bold, sans-serif font. Below the main image, the text "Asphalt & Concrete Paving & Repair" is written in a smaller font.



Engineer Spotlight

by Jeff Turov

Carlos De La Garza

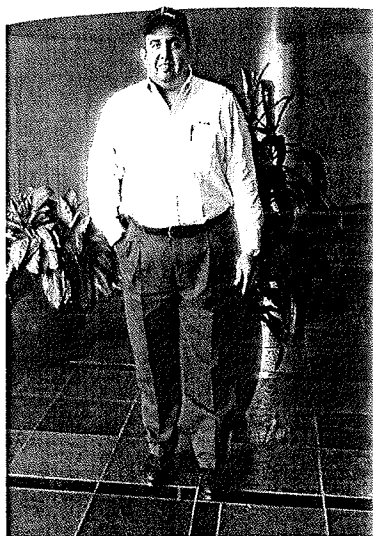
Building Engineer
Koontz McCombs Realty Services, Inc.
Twin Oaks Corporate Park
211 North 1604 East, Suite 225
San Antonio, TX 78232
210-496-3849 · Fax: 210-496-3966

- **How long have you been in the building engineer trade?**

Carlos has been involved in the trade since 1987 and has been a member of SAABE since 1994.

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

Carlos has his CFC Refrigerant certification, OSHA training, is a San Antonio certified maintenance technician, and received the Employee of the Year award while employed at First Nation Bank.



- **Hobbies?**

An avid outdoorsman, Carlos enjoys hunting birds and whitetails, fishing for whatever is biting, and traveling. He has been to Hawaii twice, has caught blue marlin in Cabo San Lucas and Hawaii, and heads south to Cancun at least once a year.

- **Family/Children?**

Carlos dated his wife for thirteen years (just to make sure it was

right) and has now been married for five years. He is now the proud father of seven-month-old Carlos De La Garza III.

- **How does SAABE benefit you the most?**

The greatest benefit Carlos receives from SAABE is through the monthly luncheons. He enjoys the fellowship shared with his peers and the information gained through the presentations. It is always rewarding to spend time with industry associates and gain knowledge through experience.



- **In all your travels, which trip stands out the most?**

His favorite trip was to Maui to celebrate his honeymoon. Carlos recommends Maui as the most relaxing island of the Hawaiian Islands.



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

Carlos has been involved in the construction of II Twin Oaks and the Monte Cristo Apartment Complex that backs up behind the Twin Oaks office complex. His direct involvement has provided him with knowledge of every nook and cranny of the II Twin Oaks building. ❖


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CELEBRATING
20 YEARS
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 BUILDING ENGINEERING

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SAABE TIMES
August Issue

Final Thought:

"It's so simple to be wise. Just think of something stupid to say and say the opposite." — Sam Levenson

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<hr/>	
Laura Bray Association Manager (laurabray@braycommunications.com)	408-1699

Membership Luncheon
Wednesday, August 16, 2006

Time: 11:30 a.m.

Location: Alamo Cafe on 281

Kendal Langenberg, Bryan Lesch & Brady Cowan

"Epect Legislation and

How It Affects Property Lighting Upgrades"

Sponsored by Voss Lighting

Upcoming Program:

Wednesday, September 20

"Nuisance Bird Control"

Sponsored by Custom Pest & Lawn

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