



SAABE TIMES

A publication of the San Antonio Association of Building Engineers

July 2004

Mark Your Calendar—

JOIN US FOR OUR JULY LUNCHEON

The next General Membership Meeting of the San Antonio Association of Building Engineers is set for 11:30 am on Wednesday, July 21 at the Alamo Cafe on 281. This month's meeting features David Geaslin, Operations and Maintenance Analyst, with a program on "Budgeting for Operations and Maintenance." Topics to be covered include why maintenance budgets fail, a self-financing plan for maintenance improvement, creating a "corporate memory" for maintenance, integrating the maintenance control function into management, low tech and innovative ways to improve quality control, and more. 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.**

We will also vote on the bylaw changes that were distributed at the June membership meeting (or mailed to you if you did not attend). In addition, we will have nomination letters for the 2004 Building Engineer of the Year

Bring your business cards – we'll have the SAABE Networking Board there to help facilitate networking. We'll also have some vendor tables for you to visit.

Please RSVP to (210) 408-1699 by Tuesday, July 20. PLEASE RSVP so we can be sure to have enough meals on hand!

We hope to see you there! ❖

SAABE Training Seminar

Recovering from a Water Intrusion

Sponsored by SAABE and Offered by Munters Moisture Control

- Thursday, July 29 at Munters Moisture Control (16900 Jordan in Selma).
- **FREE** for SAABE members.
- 11:00am–1:00pm, **lunch included.**
- RSVP required (participation limited).
- Get a better understanding of the recovery process after water intrusion. Items covered include the stages of recovery, psychometrics in the restorative industry, types of dehumidification equipment, and how building materials dry.
- Presented by Tim Young, who has been in the water recovery business since 1982.
- Mark your calendars—SAABE seminars will always be held the last Thursday of every month.
- Contact Tim Young at Munters Moisture Control at 210-651-5588 for more information or directions. RSVP to Laura Bray at 408-1699.

Education Corner

Electrical Safety, Low and High Voltage

- Sponsored by National Technology Transfer, Inc.
- August 3–4, Dallas
- In-depth training on both low and high voltage electrical safety
- For more information, visit www.nttinc.com.

HVAC Test Preparation Seminar

- Sponsored by Construction Seminars, endorsed by the Texas Air Conditioning Contractors Association
- August 6–8, San Antonio
- Cost: \$450
- Call 1-888-500-PASS or visit www.constructionseminars.com for more info.

Hazardous Waste Update

- Sponsored by the Texas Engineering Extension Service
- July 30, San Antonio
- Cost: \$325
- Call 1-800-824-7303 or visit www.teex.com for more information.

Advanced Maintenance Management

- Presented by David Geaslin, Operations and Maintenance Analyst
- September 10, Drury Inn and Suites (95 NE Loop 410)
- Cost: \$350
- Call 1-832-524-8214 or visit www.managingmaintenance.com for more information.

Contact Education Director Jock Tilghman (681-2494) if you know of other courses. ❖

A Message from the President

by Bob Beal

Thanks to the folks at Simplex Grinnell for a great seminar on fire pumps last month. We also had a great turn out. Look forward to some more great SAABE vendor-sponsored classes and seminars.

BEOTY Awards

It is almost time to take nominations for the SAABE Building Engineer of the Year award. Like previous years, it will be fun and challenging picking through the nominees and selecting a new engineer of the year. This year, if you nominate someone, you will also have to fill out a nomination form to help us understand why you feel this person should be considered for Engineer of The Year. Remember it is for "Engineer of The Year" and is not a beauty or popularity contest. It is our way of picking a fellow engineer, as a chief or assistant, and recognizing his or her accomplishments over the past year. We also would like to have managers nominate their engineers and let us know why they should get the prize. More details will be available as soon as the BEOTY Committee irons out all the details.

Internship

I still need a few more buildings for our interns to work in. Thanks to Mechanical Maintenance of Texas for hiring Brandon for 2 weeks. Also thanks to Marcie Barber and Jock Tilghman from Transwestern Commercial services for putting Brandon down for two weeks in July. I would also like to thank Travis Commercial for allowing me to keep Itzel Luna for the whole summer. Great job!!!

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Membership Drive

We started our new membership drive at the beginning of July. Our goal is to get 200 total members by the end of the year. We have some great prizes for you if you refer any new member.

Bylaw changes

I hope everyone has had a chance to review the bylaw changes. We will ask you to vote on them at our July luncheon. If you have any questions on the changes and the addition please call Laura at 210-408-1699. ❖

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Tech Talk #85

by The Charlie

The Positive and Negative Side!

In regards to the static pressure in an office building, our favorite motto is "positive is good"! The static pressure of an office building is merely the pressure differential between the atmosphere inside the building and the outside. Maintaining a positive pressure (an atmospheric pressure inside greater than that of the outside) in a building with the ability to take in 100% of outside air is relatively simple, and usually easily correctable over time as long as the heating or cooling can overcome the induced loads. However, most buildings were designed with minimal outside air intake, and the addition of some equipment can diminish the design intent and, quite possibly, cause a negative pressure within your building.

In some areas of your building, there is a need for negative pressure. Areas of negative pressure within a building will be the restrooms, a café, a film development lab, etc. The need for these areas to be in a negative state of pressure than that of the other areas of the building is simple. It is to keep the odors contained within their area and to evacuate these odors to the exterior as soon as possible.

Other than operating a building with a positive pressure, there are other areas of a building which must have more positive pressure than the positive pressure inside the building! Sound confusing? It's not. In your taller buildings, in the event of a fire or smoke, the stairwells are pressurized by means of stairwell pressurization fans. The reason for pressurizing the stairwells is to prevent/reduce the amount of smoke entering the stairwells from the common areas. These fans are activated upon alarm by the fire alarm control panel. Stairwell pressurization fans are fairly aggressive in nature. In order to control the pressure inside the stairwells and to ensure that the doors will not take excessive force to open, barometric dampers are used to dump the unneeded amount of air/pressure as doors are opened and closed. Typically, the fans draw, and dampers dump directly to the outside.

This mixture of positive and negative pressures can be difficult to put into perspective. If you can visualize a balloon, the expansion of the balloon is simply that the atmospheric pressure inside the balloon is greater than the pressure outside


the balloon... picture the balloon as your building. By inserting a small hole in the balloon, this will represent the restroom exhaust fan and minimal leakage through the doors, pre-cast, weatherproofing, etc. To maintain the inflation or positive pressure, additional air/pressure is added... much like the outside air fan on your building. However, if you add more holes for a lab, another restroom, a café, etc., you will notice that the supplemented air (outside air fan) can no longer keep up with the amount of air being exhausted. This is where troubles come in.

Now that the effects have been illustrated, each fan has a specific purpose and all need to work in unison... all areas need to be researched when adding equipment. This is when the documentation of that new restroom exhaust fan and the data on the lab fan need to be added to the additional exhaust and compared to the present outside air intake. When certain functions to the original design intent are compromised, hardships are encountered. These hardships can be attributed to a negative pressure building of which causes stacking in the winter (as heat will naturally rise, the upper floors of your building will be hot and the lower ones extremely cold due to the drafting effect), and additional heat loads in the summer months... and if you thought a deflating balloon is bad. As the balloon deflates, difficulties in maintaining the indoor environment increase!

Installing a café and designing the HVAC can be relatively simple as long as you have available money to research your present conditions and design the HVAC accordingly. There are many good air-balancing contractors who can come out and perform traverse readings on your equipment. Once you have the readings on "all" the exhaust fans and the amount of outside air being supplied, it is simple arithmetic. Another simple tool is a magnehelic gauge and some tubing. If this is not affordable, take a sheet of paper or your hand and on a calm day with the doors closed (inside or out), place the paper or your hand over any gap and see if there is air actually blowing through the crevice (blowing towards the outside is good). This is an indication of positive pressure and "positive is good"! However, too much positive can cause other problems besides being inefficient... a good indication of this is when the pressure keeps the outside doors from closing!

In regards to installing new exhaust equipment for a café, for instance—if the positive pressure of your building will not be compromised by exhausting an additional 2,000 cfm, you can then assume that if you are introducing 1,000 cfm of HVAC, and exhausting 2,000 cfm with the kitchen hood, this should keep the café in a negative state as compared to the common area, and keep the cooking odors from migrating into your common areas, and not greatly effect the positive pressure of the building. However, more

(Continued on page 4)



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Tech Talk (continued)

(Continued from page 3)

often than not, additional equipment or modifications to the existing equipment is needed after the fact. This is simply attributed to costs and too many times...the dice is rolled. If you are not familiar with air moment technology, be sure that the contractor has included monies in the scope to cover a P.E./air balancing contractor, and any modifications needed. You may also find the need to persuade the Property Manager that if these areas are not covered beforehand, hardships and more importantly additional money will come into play later.

Finally, be sure and watch wall construction during tenant finish projects. This especially is in regards to plenum return ceilings. It does not matter how much air you put into a space. If all the walls are demising (go to deck) there is no way for the air to get back to the air-handler if holes or return air ducts are not incorporated (without circulation, there is no conditioning). Another good sign is the hand or paper trick on the corridor side of a suite door while it is partially open, or check it at the bottom of the door. Of course the best sign is when the door closure will not close the door when it opens in the direction of egress. Additionally, some walls/areas may require the use of fire dampers and these can get expensive!

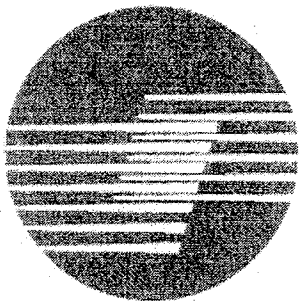
CHARLIE'S LAW: What goes up...definitely comes down harder!

JUSTA MAINTENANCE MAN ♦

Upcoming Last-Thursday Training Seminars

- **July 29:** Dealing with Water Intrusion, from Munters Moisture Control (see front page for details)
- **August 26:** Pneumatic VAVs, from Amcon Controls

Call Charles Gilbert (210-639-0800) if you'd like to offer a training class to SAABE members. ♦



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“What Is It?” Contest

Log on to SAABE’s web site at www.saabe.org for a new contest called “What is It?” Each month, we’ll post a new photo of some piece of equipment. If you know what it is, send an email to laurabray@braycommunications.com. The member who has the most right guesses by the December holiday luncheon will receive a nice prize. ❖

Vendor Showcase

SAABE meetings now feature a “Vendor Showcase,” with tabletop displays from SAABE vendors that you can visit before and after the meeting. These tabletop displays will be available at every SAABE meeting that’s not fully sponsored. For \$100, vendors can purchase a table that will be set up on the perimeter of the meeting area.

Vendors, if you’d like to fully sponsor a meeting, that option is still open to you. The cost is still \$500, and you can distribute printed material, have a tabletop display, and provide the speaker for that month’s luncheon. For fully sponsored luncheons, there will be no other Vendor Showcase tables present.

To reserve your tabletop display, contact Tim Young, SAABE’s Vendor Representative, at 210-651-5588. ❖

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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. Or call Laura Bray (210-408-1699) and she will fax one to you. ❖

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! ❖

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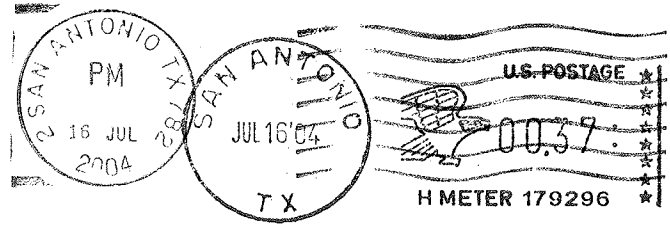
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SAABE TIMES July Issue

Final Thought:

"The American people are a very generous people and will forgive almost any weakness, with the possible exception of stupidity." — Will Rogers

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

Membership Luncheon

July 21, 2004

Time: 11:30 a.m.

Location: Alamo Cafe on 281

Program:

"Budgeting for Operations and Maintenance"
 with David Geaslin, Operations & Maintenance
 Analyst

Upcoming Luncheon:

August 18, 2004

CPS and SAWS Rate Updates

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



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