

S.A.A.B.E. TIMES

A Publication of the San Antonio Association of Building Engineers

March, 1998

Mark Your Calendar —

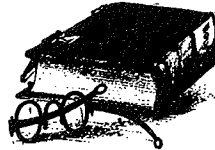
MMT and the **ABCs of DDC**

Mechanical Maintenance of Texas/Ward Systems will sponsor the SAABE March 18, 1998 General Membership meeting. The topic will be the Fundamentals and Terminology of Direct Digital Controls (DDC) and the application to HVAC.

Mechanical Maintenance of Texas, a division of Ward Systems, was established in 1974 to provide repairs, service and installation of HVAC systems in South Texas. MMT is now one of the largest HVAC service companies in the region, providing service to over 150 commercial properties in San Antonio. In 1981, Ward Systems was selected to be the Barber-Coleman (now SIEBE) environmental controls representative in this area. They now have over 100 environmental/energy management systems installed in South Texas.

The program will be presented by Bob Wright, Division Manager of MMT since 1982, and Mike Alvarez, Engineer and Sales Director for Ward since 1990.

As you all know, Bob, Mike and MMT/Ward Systems are long-time supporters of SAABE. What you may not know is how knowledgeable these guys are about their products! Whether you are an old hand at DDC controls and need some particular questions answered, or a rookie who wouldn't know his analog input from his digital output, this presentation is for you.



Education Corner

By Mike Lusk

Our regular Board of Directors meeting was held on March 4th. Mr. Ed Vallejo of the Texas A&M Engineering Extension (TEEX) was present to discuss educational opportunities for our members. A partnering arrangement is being looked at as a means of providing needed courses. More to come on that later, AFTER we get the results of a survey that you will receive in the not-too-distant future. When you get it, please give us realistic responses so that we can better serve you. Mr. Vallejo will be providing us a proposal for a course on CODES, which I am sure you can all use.

Some Upcoming Seminars:

Petroleum Storage Tank Workshop: TNRCC, FREE, San Antonio, March 24, 1998, 6:30 p.m., TEEX Bldg 277, Hemisfair Park. More information: PST Technical Services (512) 239-6718 or (512) 239-2159.

Maintenance Management: Clemson University, two days. San Antonio, April 2-3, 1998. \$795.00, Plaza San Antonio. More information: Kay James (864) 656-2200.

Basics of Industrial Electricity: Performance Training Associates, Inc. (PTA), one or two days, \$395/\$395/\$595. San Antonio, May 21-22, 1998. More information: PTA, Electrical Controls Manager 1-800-208-6108.

Mike Lusk has a brochure for the above items. He can let you see it, or make a copy if you are interested. Please give him a call at 340-2533..

What is a CEU, and how much are they worth?
What do they call duct tape in St. Hedwig?
Chrome.

Above the Ceiling

By Paul Thompson

Did You Know...

...That if you have any type of alarm (fire, security, panic/burglar, etc.) in either your home or business, and whether that alarm is monitored or not, *you must have a permit registered with the San Antonio Police Department?* The permit is good for two years and will cost you \$10.00 for a residence or \$25.00 for commercial. Along with the money, you will need to fill out an Alarm Permit Application for each system including, location, type of alarm, hazards at site, responsible person, contact numbers, etc. Once a permit is received, it is to be kept at the site of the alarm. It is the responsibility of the permit holder to provide the permit number to their alarm and/or monitoring company.

So what if you don't have a permit? You could get filed on in Municipal Court for violating the ordinance. The fine is \$300.00 to \$500.00. There are also fines for excessive false alarms. The first five false burglar alarms are free — number six is \$50.00, number seven is \$100.00, etc. On fire alarms, you get three free, then \$50.00, \$100.00, \$150.00 — you get the picture! Good reason to make sure that your alarms are in good working order and well monitored. SAPD will respond to an alarm, permit or not (but it could cost you).

To receive a permit application or more information, contact:

**San Antonio Police Department
Alarm Unit
PO Box 839948
San Antonio, TX 78283-9948
Phone: (210) 207-8282
Fax: (210) 207-4349**

(Thanks to Sophie and Cindy for this information)

Maintenance, Electrical, etc...

A big SAABE "Thank You" to City of San Antonio Electrical Inspectors, Chief Patrick Poloskey, Ray Martinez and Valerie Gleason (you can contact Valerie at 213-5808). Pat and company put on a great presentation on the City Electric Code revisions and how it affects us in the electrical

maintenance field. The big changes are not just coming — they are *here!* Have you applied for your Maintenance Electrician license or your Maintenance Technician registration? How about your annual Electrical Permit? If not, are you ready to pay electrical contractors to do this work for you?

If you're one of the people who attended the first "Registered Electrical Maintenance Technician" course (sponsored by the Independent Electrical Contractors and SABOMA), I think that you'll agree that it was well worth the money. City Electrical Inspector Ray Martinez guided the class through the updated City Electrical Code revision and taught a very good, working introduction to the National Electric Code (NEC) handbook. Note to future students:

Bring an NEC handbook with you — you'll get a lot more out of the class! Even if you've carried a pair of Kleins in your tool belt for 20 years, you'll get something out of this class.

One very good point that Ray brought up, and one that is forgotten in our day-to-day dealings with electrical work, is safety. I don't have enough fingers on both hands to count the times that I've been zapped. Like Ray said, any one of those could have killed. This can be a dangerous occupation — people do get hurt and killed, fires can be started, you *do* need to know what you are doing. Electricity has no heart, it does not forgive. For more information on the course, call Lynn Forester with SABOMA at 521-8838.

There still seems to be some "gray areas" in the revised City Code that we are trying to get clarified (where is the line drawn between what a Maintenance Electrician and a Maintenance Technician can do, "Grandfathering", etc.) and we plan to pass on this information as it becomes available to us. In the meantime, don't wait! Get together verification of any electrical and/or maintenance jobs you have done (letterhead paper, dates, etc.). Take the electrical course. Talk to your building manager about it. Go down to the City and SIGN UP!

Lastly, good luck Maree — we will miss your "bright and cheery smile" (my hand is shaking as I write this). And Charlene — welcome back! Good to see you!

Water Treatment Management (Part 1 of 4)

In having the opportunity to either visit or operate many chilled water plants in San Antonio, I have discovered two common points of interest; (a) if you can successfully manage water treatment here in San Antonio, you may probably be able to manage the same in Anywhere, USA; (b) most of all the controllers, pumps, methods of operation and testing that I have come across are antiquated, compared to technology presently available. The reasons may be as simple as budget restraints or, the individuals who are monitoring the system are not adequately advised or trained by their vendors.

Again, having the opportunity to work with mostly all of the water treatment vendors over the years has provided myself and others the ability to have one of the best proactive water treatment management programs in the city. In this article, I will neither promote, nor disclaim, any of our valued water treatment vendors. However, I have found that unless you ask specific questions regarding components, applications and procedures about your system, you probably will not receive the valued information I am about to relay. In order to apply this article to everyone out there, I will try to speak from a basic to an intermediate skill level.

One of the top things that makes me shudder is to discover that the only time testing and calibration to the water treatment systems are done is when the vendor comes by weekly, or worse, on a monthly basis. Forget it, you are heading for disaster! The only application where this might be accepted is if you are dealing with a tight (no leaks), chilled water loop only, on an air-cooled chiller. I can only imagine the explanations/excuses to either the Property Manager and/or the Asset Manager as to why they have to replace a cooling tower or re-tube the condenser after only a few years. The life expectancy of these components should be at least 15-20 years, or even longer with proper management. The maintenance staff should have the necessary training and equipment to test the condenser water on a recommended minimum of twice a day (once in the morning, and once in the evening). This will leave only a few hours to identify and correct a problem, should something go haywire, rather than having a problem for

days or weeks before it is noticed. Ask your vendor to supply your facility with the testing equipment and train you in its use. This is usually figured in with the contract, and should not cost you anything extra.

Do not rely on the readings of the controller to always be accurate! Double-check everything! The controllers being used today have more than likely been in use since the building was built. There is a common fear that new controllers are exorbitant. Well, try \$30K+ for a re-tube, or \$40K+ for a new cooling tower. Actually, you can purchase a controller with some pretty nice bells and whistles for around \$2,500 (this is an easy pass through). If you are presently utilizing a controller that is manufactured by your

present or past vendor, you are not bound to such. Contact Lakewood Instruments at 1-800-228-0839.

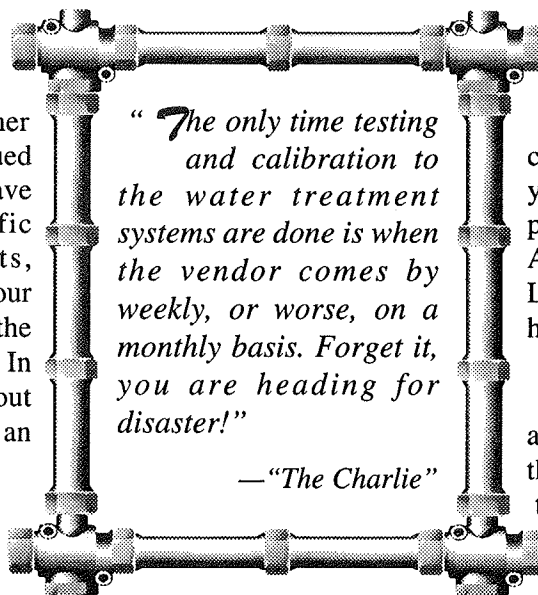
Lakewood has been manufacturing controllers for many years and best of all, you will not be tied to your vendor for parts. Lakewood even has a Technical Assistance line. I have installed four Lakewood model #2412 controllers and have not been disappointed.

However, it is recommended to install a contacting head water meter on either the make-up or blow-down side of the tower to make this installation effective.

Personally, I prefer this meter installed on the make-up side for total water calculations (blow-down, evaporation), for applying inhibitors. You may still install this controller without a contacting head meter and feed your chemicals by percent of blow-down, but to effectively control your chemical concentrations to restrictive limits, the precise measurement of the contacting head meter is preferred. **Point to Ponder** — A portion of the present controllers were installed during the use of chromate. Typically around 150ppm (+/- 25ppm) of chromate was all that was needed for excellent corrosion inhibition. Without the use of this heavy metal, the parameters of control you must currently maintain for corrosion inhibition have decreased, but can be achieved with the microprocessor controllers.

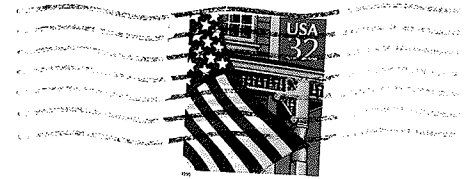
Next month: Probes and Coupons!

"The Charlie"





**San Antonio Association
of Building Engineers**
601 N.W. Loop 410, Suite 50
San Antonio, TX 78216



Charles Mikolojczyk
The Forum
8000 W IH-10, Ste 250
San Antonio TX 78230

S.A.A.B.E. TIMES
March Issue

1998 Dues Payments Due Now

Invoices have been mailed.
Please call 524-9441 if you did not receive your invoice.

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Lynn Forester
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MARCH MEMBERSHIP LUNCHEON

March 18, 1998

Time: 11:30 a.m.

Location: Tex's Restaurant in the Airport Hilton

Sponsored by: MMT/Ward Systems

Speaker: Bob Wright, MMT Division Manager

Next Luncheon: April 15, 1998

Sponsored By: Nathan Alterman/TEGG Service Contractor

Speaker: Mike Coffey

Topic: Electrical Preventative Maintenance