

CHAPTER OFFICERS

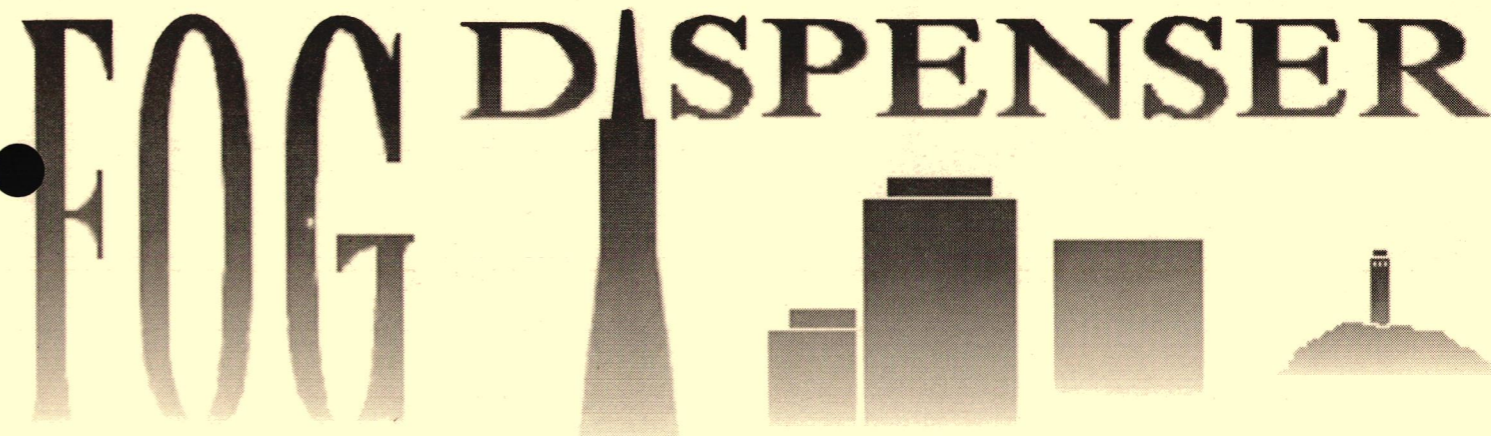
Richard Leao PRESIDENT
 Richard Paillon PRESIDENT-ELECT
 Gail Brager SECRETARY
 Roy Gifford TREASURER

BOARD OF GOVERNORS

Barbara Dilts
 Daniel Reiter
 Dennis Thompson

COMMITTEES AND CHAIRPERSONS

ATTENDANCE	Roy Gifford	MARBLES GAME	Tim Provo
AUDITING	Hendrik Mouw	MEMBERSHIP	Michael Rubio
AWARDS	Jack Kniveton	PRODUCT SHOW	Brad Gustafson
BAEC	Tom Reinarts	PROGRAM	Richard Paillon
CODE	Robert Braun	PUBLICITY	Ellen Pierce
CRC ACTION	Richard Paillon	RECEPTION	Sal Giglio
EDUCATION	Jon Wintermeyer	REFRIGERATION	Lewis Brooks
ENERGY & TECHNICAL	Mark Hydeman	RESEARCH PROMOTION	Ben Sun
FOG DISPENSER	Rachel Murray	ROSTER	Jim Taylor
GOLF	Mark Luckes	SF ADMIN. CODE	Pete Johnson
GOVERNMENT AFFAIRS	Robert Braun	SCHOLARSHIP	Debi May
HISTORIAN	Robert Phillips	SEMINAR	Ernie French
HONOR ROLL	Tim Provo	TENNIS	Said Nazeri



Golden Gate Chapter



ASHRAE

VOLUME XXXII • NUMBER 9

JUNE 1993

MEETING NOTICE

DATE: Thursday, June 3, 1993
 SOCIAL HOUR: 5:30 p.m.
 DINNER: 6:30 p.m.
 LOCATION: Engineers Club
 160 Sansome Street, 17th Floor
 San Francisco, CA
 COST: \$25.00
 NOTE: Please fax your dinner reservation to Rick Paillon by noon on **Tuesday, June 1, 1993**. A fax form is enclosed for your convenience.
 PHONE: (415) 512-9771
 FAX: (415) 512-8940

JUNE PROGRAM

SPOUSES NIGHT/AWARDS NIGHT

Bring your spouse or significant other for an enjoyable social event to end the year. A great dinner is planned. New officers will be installed and awards will be made to those who have contributed to ASHRAE this last year. Also, get a preview of what is planned for next year. Let's make this last meeting our best attended event.



Golden Gate Chapter
 ASHRAE
 370 Brannan Street
 San Francisco, CA 94107

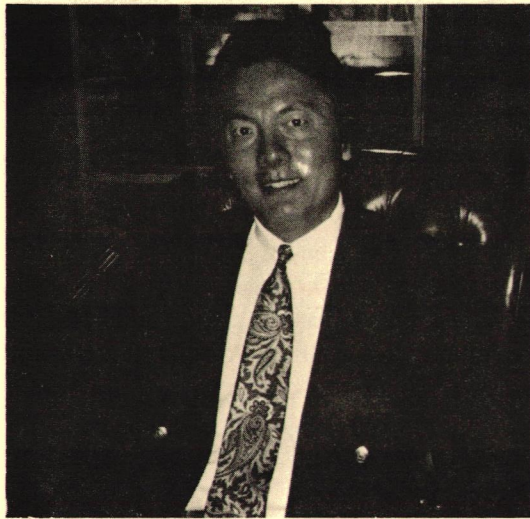


Richard A. Charles
 Charles & Braun
 150 Spear Street
 San Francisco, CA 94105

JUNE HONOR ROLL

HONOR ROLL

The Fog Dispenser needs you! You can sign up for the Honor Roll for next year. Your donation of \$100 helps to pay for the publication of our monthly newsletter.



PRESIDENT'S MESSAGE

May has been a busy month, starting with our Seminar and Product Show and followed by the field trip to the Safeway Facility in Menlo Park.

I would like to take this opportunity to express a special thank you to Atma Advani, Chief Mechanical Engineer of Safeway Facilities, for taking the time and effort in making our ASHRAE field trip a very special one. It was definitely interesting to see all the behind-the-scenes activities.

I had lunch recently with Mr. and Mrs. Flemming Andresen, Dick Glumac and Dart Rinefort (both Past Presidents of our Chapter). The Andresen's son, Eric, whose life was tragically taken at a young age, used to work for Glumac & Associates. For those who don't remember, through our annual Golden Gate ASHRAE Tennis Tournament, we have set up an "Eric Thor Andresen Memorial Scholarship Fund" with the proceeds from each year's tournament being matched dollar-for-dollar by Eric's parents.

I used to play tennis with Eric; he was an excellent player as well as a very special individual. The loss of their only son is definitely a heavy and sad burden for them, and to this day I see it in his mother's eyes when she talks about him. And yet, her expression turns to joy and calmness when she sees how much the Scholarship Fund has grown and that we are able to offer hope to other students through this scholarship.

We don't always know why things turn out the way they do, but we hope that we all learn from the experience and that something good will come from it.

So, to end on a good note, remember all you hot shot tennis players, let's sign up for our June 4 Tennis Tournament. Please contact Said Nazeri at (415) 398-3833 for any details (a flier can be found in the May *Fog Dispenser*.)

Wishing you all well for the summer! I look forward to seeing you next fall.

Richard Leao

THE MARBLE DRAW

Next Month's Starting Pot: \$245.00+
Odds: 25%
Black Marbles Remaining: 3



NEW GOLDEN GATE CHAPTER MEMBERS

Please welcome the following member to our Chapter:

Yevgeny Gutkin Scott Polar Refrigeration

MINUTES OF THE MEETING
May 6, 1993

1. The meeting was held at the Sundance Mine Company in Palo Alto, following a very interesting field tour of Safeway's experimental site in Menlo Park. The meeting was called to order at approximately 8:00 p.m.
2. Bill Jackson of Hussman Refrigeration, Atma Advani of Safeway and Mukesh Khattar of EPRI answered questions about the field trip.
3. The minutes of the April ASHRAE meeting were approved without amendment.
4. The trip to Hawaii is still available. You may qualify by donating money to ASHRAE research. Ben Sun will be calling members at home for their donations.
5. Gene Valerio will be receiving the ASHRAE Distinguished Service Award. His letter thanking the Chapter for its support was read aloud.
6. The ASHRAE tennis tournament will be held June 4. Entry forms were available in the May *Fog Dispenser*. Questions can be directed to Said Nazeri at Flack + Kurtz.
7. Ernie French gave a quick review of the ASHRAE Seminar and Product Show. Both events were well received, however attendance was lighter than expected.

IN MEMORY

Well known consulting engineer, Hector Aiken, died in February, at the age of 76, after a lengthy illness. He last resided in Santa Cruz.

Hector was a life member of ASHRAE and was active in both the San Jose and Golden Gate Chapters. For many years, Hector practiced as a consulting engineer with offices in Menlo Park and, later, in Los Gatos.

Hector received his undergraduate degree in Mechanical Engineering from the University of Illinois. While at the University of Illinois Hector assisted the late Professor Seichi "Bud" Konzo in his pioneer work in forced, warm air heating and residential air conditioning.

Hector then went on to obtain his Masters degree in Mechanical Engineering from Stanford University. He was on the faculty of the University of Illinois, The University of Arizona and, later, the University of Santa Clara. He was a member of Sigma Phi Delta, Tau Beta Pi and the National Engineering Honor Society.

FOG DISPENSER

We will need an editor for next year's *Fog Dispenser*. This is a great opportunity to become more involved in our Chapter. Nine monthly issues are published from October through June. Each issue takes an average of twelve hours (to sixteen hours) to prepare. Currently, the *Fog Dispenser* is produced using Microsoft Word for the Macintosh to enter the text and Aldus PageMaker to lay out the newsletter. Templates can be provided to produce next October's newsletter with either or both of these programs, but it can be prepared using any word processing or desktop publishing software. The role of editor is very rewarding because one learns more about ASHRAE and has the opportunity to work with great people. If you are interested, please call Rachel Murray at (415) 397-0442.

ASHRAE GOLF TOURNAMENT

This year's ASHRAE Golf Tournament will be held during the month of September. It will be a shotgun start, scramble format. Proceeds from the tournament will be used to support the other fund-raising efforts of the Golden Gate ASHRAE Chapter. All ASHRAE members should plan to attend. You will be hearing from the Golf Committee soon. If you have any questions, call Mark Luckes at (415) 550-2087.

SEEKING EMPLOYMENT

Since 1989, the Jewish Family Service Resettlement Program has provided resettlement services in Alameda and Contra Costa County for over 1,000 political and religious refugees. Our program provides such services as counseling/case management, employment, English language tutoring, and acculturation activities. We have people in their various stages of acculturation who are seeking employment. We would appreciate your partnership by providing us with the opportunity to contribute in supplying workers for you and your industry. Please contact or mail your job openings to Elsie Lee, Job Developer, Jewish Family Service Resettlement Program of the Greater East Bay, 3245 Sheffield Avenue, Oakland, CA 94602. (510) 532-6347. The following are some examples of those seeking employment:

- Heating, refrigerating, and air-conditioning support persons.
- AutoCAD operators.
- Biochemists, chemists, physicists.
- Engineering/technical support persons.
- Machine repair persons.
- Office aids.
- PC operators.
- Janitors, commercial and residential.

DO YOU KNOW A PROSPECTIVE NEW MEMBER?

Contact *Membership Chair*:
Michael Rubio (415) 777-5333
(415) 641-4413 FAX

MAIL, FAX or PHONE NEWS TO:

FOG DISPENSER
Rachel Murray, *Editor*
Charles M. Salter Associates, Inc.
130 Sutter Street, Suite 500
San Francisco, CA 94104

Telephone (415) 397-0442
FAX (415) 397-0454

FOG DISPENSER DEADLINES

Meeting Dates	Copy Deadlines

Published monthly, October through June, by the GOLDEN GATE CHAPTER OF THE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, c/o Duplicating Associates, 370 Brannan Street, San Francisco, CA 94107

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Board of Governors

Barbara Dilts Daniel Reiter
Dennis Thompson

Golden Gate Chapter - Programs & Special Interests Survey

Meaningful and relevant programs are the key to a successful ASHRAE year, and positively influence meeting attendance, membership, volunteer service, and research contributions. Input from members like yourself was strongly emphasized at the recent CRC. Don't leave it up to the chapter program chair and other board members to guess what you would like for a program. We need your help to create a program that meets your interests!

A successful program that many Chapters in our region adopted was to form loose-knit "technical committees" or "special interest groups", made up of members with mutual interests. These groups then helped to shape the content, or to find a speaker, for one evening's program or perhaps a technical seminar held before the dinner. These special interest groups are a great opportunity to get involved and make a difference, with a minimal time commitment.

WE NEED YOUR IDEAS !!!!! Please fill out the survey below, and return to Gail Brager.
(please bring it to the June Chapter meeting, or put it in the mail before July 1).

Name: _____

Phone: _____

General Topics	I would like to attend a Program on these topics	I would like to attend a pre-dinner Technical Seminar on these topics	I am interested in participating in an informal special interest group on these topics, and would be willing to serve as:	
			Chair	Member
Indoor air quality				
Energy conservation				
Thermal comfort				
CFC's				
Fire & smoke control				
Refrigeration				
Building commissioning				
Window technologies				
Cogeneration				
Evaporative cooling				
Thermal storage				
Cold air distribution				
Clean spaces / laboratory spaces				
Energy efficient system design				
Fan selection and application				
Air distribution design				
Panel discussions (<i>various topics</i>)				

Additional topics:

Please add additional information on the back of this page, if you have specific ideas for programs, names or phone numbers of potential speakers, or resources from which to get specific names:

Please return survey by July 1 to Gail Brager, Dept. of Architecture, Univ. of California, Berkeley, CA 94720. Phone: (510) 642-1696. Fax: (510) 643-5571 (no cover sheet required)

ASHRAE GOLDEN GATE CHAPTER

**DINNER RESERVATION FAX FOR
THURSDAY, June 3, 1993**

Please send Fax by **noon** on **TUESDAY, June 1**

TO: RICHARD PAILLON, Randall Lamb Associates
FAX NO.: (415) 512-8940

Please call if you have any last minute changes in plans at (415) 512-9771.
Please cancel your reservation(s) if you cannot attend the meeting.

Please make 2 reservation(s). Following are the names of those who will attend:

RICHARD A. CHARLES _____
"VAN" CHARLES _____

FAX EARLY!

PLEASE MAKE CHECKS PAYABLE TO "ASHRAE"

SIGNATURE: RM a charles

COMPANY: C&B ENGINEERS PHONE: 415-442-0110

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COMMITTEES AND CHAIRPERSONS

ATTENDANCE
 AUDITING
 AWARDS
 BAEC
 CODE
 CRC ACTION
 EDUCATION
 ENERGY & TECHNICAL
 FOG DISPENSER
 GOLF
 GOVERNMENT AFFAIRS
 HISTORIAN
 HONOR ROLL

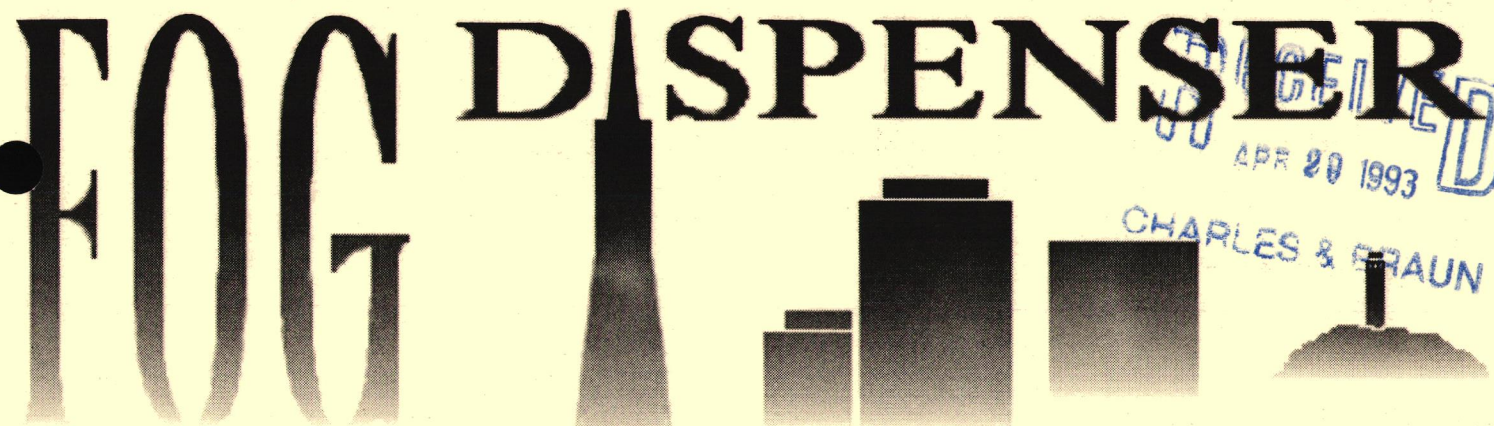
Roy Gifford
 Hendrik Mouw
 Jack Kniveton
 Tom Reinarts
 Robert Braun
 Richard Paillon
 Jon Wintermeyer
 Mark Hydeman
 Rachel Murray
 Mark Luckes
 Robert Braun
 Robert Phillips
 Tim Provo

MARBLES GAME
 MEMBERSHIP
 PRODUCT SHOW
 PROGRAM
 PUBLICITY
 RECEPTION
 REFRIGERATION
 RESEARCH PROMOTION
 ROSTER
 SF ADMIN. CODE
 SCHOLARSHIP
 SEMINAR
 TENNIS

Tim Provo
 Michael Rubio
 Brad Gustafson
 Richard Paillon
 Ellen Pierce
 Sal Giglio
 Lewis Brooks
 Ben Sun
 Jim Taylor
 Pete Johnson
 Debi May
 Ernie French
 Said Nazeri



Golden Gate Chapter
 ASHRAE
 370 Brannan Street
 San Francisco, CA 94107



Golden Gate Chapter



ASHRAE

VOLUME XXXII • NUMBER 8

MAY 1993

FIELD TRIP NOTICE

DATE: Thursday, May 6, 1993
TIME: 6:30 p.m. at Safeway; dinner afterwards.
LOCATION: Field Trip to Safeway Store #990
 525 El Camino Real (at Middle Avenue)
 Menlo Park
 Meet in front parking lot at 6:30 p.m.
See enclosed map.

DINNER: Sundance Mine Company
 1921 El Camino Real (at Stanford Ave.)
 Palo Alto
 A banquet room has been reserved.

COST: \$25.00 for dinner; field trip is free.

NOTE: Please fax your field trip and/or dinner reservation to Rick Paillon by noon on **Tuesday, May 4, 1993. Indicate whether you will attend dinner.** A fax form is enclosed for your convenience.

PHONE: (415) 512-9771
FAX: (415) 512-8940

MAY PROGRAM

FIELD TRIP: Atma Advani of Safeway and members of EPRI and Hussmann Corporation will lead a tour of Safeway's experimental site in Menlo Park.

Safeway and the Electric Power Research Institute have been performing research at this facility since 1985. Currently, the energy efficiencies of supermarket systems using various new refrigerants are being compared to those of systems using conventional refrigerants.

HONOR ROLL

The Fog Dispenser needs you! You can sign up for the Honor Roll for the month of June or for next year. Your donation of \$100 helps to pay for the publication of our monthly newsletter.



PRESIDENT'S MESSAGE

Once again, CRC is upon us. Rick Paillon, along with Gail Brager and several committee chairs, are all preparing to make their trek to the Riverside Meeting coming up in May. I would like to encourage those of you who have not yet attended a CRC meeting to consider going, as it is both very interesting and enlightening.

I would like to congratulate Mike Scofield, our local Chapter member, for having his well-presented article on "Low Temperature Air with High IAQ for Tropical Climates" appear in the March issue of the ASHRAE Journal.

We have our Field Trip Meeting coming up in May and our final meeting in June, followed by our annual summer break. Time really flies by when you're having fun.

I would like to encourage our members to apply for the committee chairs and co-chairs that will become available during the summer months. I strongly urge those interested to contact our President-Elect, Rick Paillon, or your Board members to sign up now.

It is truly a very special feeling to give back to an organization like ASHRAE that has given us so much over the years by volunteering to be on a committee, and in the process growing and learning while at the same time having fun. For this very reason, I make it a point at our monthly Chapter meetings to acknowledge the attendance of our past Chapter Presidents. These special individuals have been through the chairs and served on many committees through the years and still find time to continue to help and offer their guidance to the new and younger members who are steering our Chapter, literally, into the next century.

Our Chapter is no different from a sports team; it takes the effort of everyone to make it work. Remember, the more you can do for ASHRAE, the more ASHRAE can do for you and others.

I'm looking forward to seeing all of you at our May field trip.

Richard Leao

THE MARBLE DRAW

Next Month's Starting Pot: \$245.00+
 Odds: 25%
 Black Marbles Remaining: 3



NEW GOLDEN GATE CHAPTER MEMBERS

Please welcome the following members to our Chapter:

- | | |
|--------------------|-----------------------|
| Andre Boudin | Jensen Instrument Co. |
| Dennis Gruszynski | Overseas Resources |
| Linda McDaid | Honeywell |
| Kristin Rockenbach | Landis & Gyr Powers |
| Steven Salter | Yamas Controls |
| Michael Moorehead | Flack + Kurtz |

DO YOU KNOW A PROSPECTIVE NEW MEMBER?

Contact *Membership Chair*:
 Michael Rubio (415) 777-5333
 (415) 641-4413 FAX

MAIL, FAX or PHONE NEWS TO:

FOG DISPENSER
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FOG DISPENSER DEADLINES

Meeting Dates Copy Deadlines

June 3, 1993 May 11, 1993

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- Richard Leao *President*
 Richard Paillon *President-Elect*
 Gail Brager *Secretary*
 Roy Gifford *Treasurer*

Board of Governors

- Barbara Dilts Daniel Reiter
 Dennis Thompson

SCHOLARSHIPS AWARDED

Congratulations go out to two outstanding U.C. Berkeley students: Alison Kwok and Anne Baughman. Alison received the \$750 Golden Gate ASHRAE Award and Anne received the \$500 Eric Thor Andersen Scholarship. Good luck to both. All non-recipients are encouraged to apply again next year. (The award amounts are rumored to increase.)

PLUMBING AND HEATING CLUB

The Plumbing and Heating Club of Northern California is celebrating its 64th year! It is a golf social club for individuals in the plumbing and heating industry. Our upcoming 1993 tournament sites and dates are:

- | | |
|--------------|-------------------------------------|
| June 11 & 12 | Lake Ridge Golf Course, Reno |
| August 19 | Richmond Golf & Country Club |
| October 15 | Peacock Gap Golf Club |
| December 12 | Lake Merced Country Club (Hi-Jinks) |

If you would like more information, please contact Jeff Schneider at (415) 821-4303.

UPCOMING CLASSES

The Trane Company - San Francisco Bay Area Sales District, with its new location in Sunnyvale, now has a modern training facility. With that, we are making customer training available to the valued clients of the Trane Company. Among the offerings will be:

Available Courses	Intended Audience	Date
Refrigeration System Equipment Room Design	System Designers, Design Build Contractors, Engineers, Owners, & Code Officials	5/27
Refrigerant Transition & Recovery Certification	HVAC Service & Maintenance Technicians	5/4 & 5/7
High Pressure Service (A Valued-Added Certification Supplement)	HVAC Service & Maintenance Technicians	5/5
Low Pressure Service (A Valued-Added Certification Supplement)	HVAC Service & Maintenance Technicians	5/6

For more information, circle the class(es) of interest and FAX to (408)481-3666.

Pacific Coast Trane Company
 Attn: David Fiala, Director of Training.

Please feel free to give David Fiala your ideas on future course offerings and an idea of how many from your firm would attend your desired prospective course.

FOG DISPENSER

We will need an editor for next year's *Fog Dispenser*. This is a great opportunity to become more involved in our Chapter. If you are interested, please call Rachel Murray at (415) 397-0442.

SEEKING EMPLOYMENT

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- Heating, refrigerating, and air-conditioning support persons.
- AutoCAD operators.
- Biochemists, chemists, physicists.
- Engineering/technical support persons.
- Machine repair persons.
- Office aids.
- PC operators.
- Janitors, commercial and residential.

EMPLOYMENT OPPORTUNITIES

Senior Project Engineer and Project Engineer: Energy Investment, Inc., a prestigious national firm specializing in energy management, is expanding its leading role as a full-service firm which offers planning, implementation, engineering, and project management to utilities and large facility owners. As we build our California and Western States Regional Office, we are seeking a Senior Project Engineer and a Project Engineer. These positions require a BSME or BSEE, (or comparable technical education or experience), strong technical, analytical, writing/verbal skills and related experience in building energy consulting/engineering analysis, design, and construction. The Senior Project Engineer should also have strong project management skills in utility DSM programs. If you are a motivated professional with the required background and want to join a leader, send your resume with salary history to Marilyn Tromer at:

Energy Investment, Inc.
 One Winthrop Square
 Boston, MA 02110

Assistant Engineer for "Design-Build" HVAC Contractor. Should have M.E. or HVAC degree, EIT and two (2) years experience in HVAC Contractors' or Engineers' office. Send resumes to:

Construction Department
 23188 Foley Street
 Hayward, CA 94545

ASHRAE GOLDEN GATE CHAPTER

**FIELD TRIP & DINNER RESERVATION FAX FOR
THURSDAY, May 6, 1993**

Please send Fax by **noon** on TUESDAY, May 4

TO: RICHARD PAILLON, Randall Lamb Associates
FAX NO.: (415) 512-8940

Please call if you have any last minute changes in plans at (415) 512-9771.
Please cancel your reservation(s) if you cannot attend either the field trip or the dinner.

Please make _____ reservation(s) for the field trip. Following are the names of those who will attend:

_____	_____
_____	_____
_____	_____
_____	_____

Please make _____ reservation(s) for dinner. Following are the names of those who will attend:

_____	_____
_____	_____
_____	_____
_____	_____

FAX EARLY!

PLEASE MAKE CHECKS PAYABLE TO "ASHRAE"

SIGNATURE: _____

COMPANY: _____ PHONE: _____

MINUTES OF THE MEETING

April 1, 1993

1. President Richard Leao called the meeting to order at 7:35 p.m. Self-introductions followed.
2. The March meeting minutes were approved.
3. The floor was opened to add names to the ballot for new officers. No names were offered. A motion was then made and passed to close the nominations.
4. Jon Wintermeyer described the Bay Area Science Fair, for which he represented our Chapter as a judge. Jon then presented the awards to the 2 student winners: Robert Hamilton and Ryan Knoth. Each student received a framed letter of congratulations from the Golden Gate President and a \$50 bond.
5. Richard Jackson-Gistelli presented the agenda for the upcoming Technical Seminar on "CFC Design Alternatives," scheduled for May 5. The committee has put together a great line-up of speakers addressing practical solutions and all members are encouraged to attend. There will be an early-bird registration of \$75 (if paid for by April 15). Otherwise, registration is \$85, with discounts available for groups of 2 or more individuals from the same company.
6. Gail distributed the 2nd survey to get attendees' feedback regarding preferred location(s) for Chapter meetings held in '93/'94. It was again stressed that the survey was for informational purposes only (i.e., no decisions will be made based solely on the results). Results of both the March and April surveys are published in this issue. Additional comments are welcomed and we invite you to submit them in writing to the Board.
7. Ernie French stood in for Brad Gustafson and announced that the Product Show will be held upstairs at the Pacific Energy Center, simultaneous with the Technical Seminar. People are encouraged to attend both, since they will be quite different from each other and equally informative. Vendors or engineering firms that want to have a table at the show should contact Brad at (415) 972-5238.
8. Dan Reiter stood in for Debi May to present the scholarships to this year's student winners. After thanking everyone who contributed their time and money to the scholarship fund, he presented the Golden Gate Scholarship for \$750 to Alison Kwok and the ETA Scholarship for \$500 to Anne Baughman. Both students were from U.C. Berkeley.
9. **PROGRAM:** Our speaker was Kristin Heinemeier, a Ph.D. student in the Building Sciences Program at U.C. Berkeley and a Senior Research Associate in the Energy Analysis Program at Lawrence Berkeley Laboratory. Kristin spoke about her dissertation work investigating the use of energy management and control systems for data monitoring and conservation program evaluation.

SURVEY RESULTS

A survey was distributed at the last two meetings to learn which of the following options were preferred by attendees: 1) All meetings at the Engineers Club (EC); 2) All meetings at the Pacific Energy Center (PEC); 3) 50% at each; or 4) Six meetings at EC and two at PEC. This survey was for informational purposes, only, and no decisions will be made based solely on these results. We invite you to submit any comments or questions to the Board. The survey results were as follows:

March meeting survey, conducted at Engineers Club - 53 responses:

Option	Rank of Preference				
	1	2	3	4	n/a*
All at Engineers Club	15	9	10	13	6
All at PEC	8	5	7	20	13
50/50	12	17	11	3	10
6 at EC/2 at PEC	17	10	10	4	12

April meeting survey, conducted at Pacific Energy Center - 40 responses:

Option	Rank of Preference				
	1	2	3	4	n/a*
All at Engineers Club	10	9	4	15	2
All at PEC	16	1	0	16	7
50/50	1	20	11	1	7
6 at EC/2 at PEC	13	4	16	0	7

Combined surveys, added together:

Option	Rank of Preference				
	1	2	3	4	n/a*
All at Engineers Club	25	18	14	28	8
All at PEC	24	6	7	36	20
50/50	13	37	22	4	17
6 at EC/2 at PEC	30	14	26	4	19

*n/a indicates the number of people who did not respond to each option.

CHAPTER OFFICERS

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 Richard Paillon PRESIDENT-ELECT
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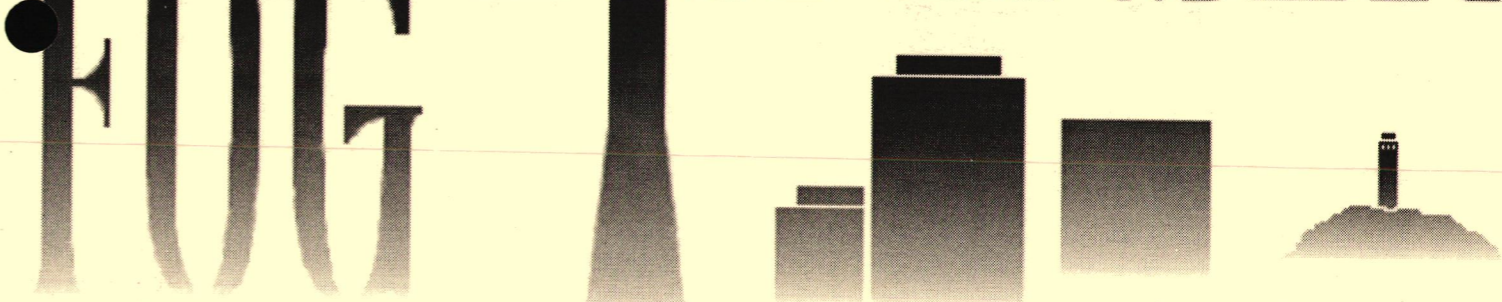
RECEIVED
 MAR 24 1993

CHARLES & BRAUN



Richard A. Charles
 Charles & Braun
 150 Spear Street
 San Francisco, CA 94105

FOG DISPENSER



Golden Gate Chapter



ASHRAE

VOLUME XXXII • NUMBER 7

APRIL 1993

MEETING NOTICE

April's meeting will be the second Student Night this business year.

DATE: Thursday, April 1, 1993
SOCIAL HOUR: 5:30 p.m.
DINNER: 6:30 p.m.
LOCATION: Pacific Energy Center
 851 Howard Street
 San Francisco, CA
COST: \$25.00
NOTE: Please phone or fax your dinner reservation to Richard Paillon by noon on Tuesday. A fax form is enclosed for your convenience.
PHONE: (415) 512-9771
FAX: (415) 512-8940

APRIL PROGRAM

PROGRAM: Using Building Management Systems to Monitor Energy Conservation
SPEAKER: Kristin Heinemeier, P.E., Lawrence Berkeley Laboratory

Ms. Heinemeier is a doctoral student in the Building Science Program at U.C. Berkeley. She is also a Senior Research Associate in the Energy Analysis Program at L.B.L. She was a recipient of a Golden Gate Chapter student scholarship and the first student sponsored by the Chapter to attend an ASHRAE winter meeting.

Kristin has been evaluating the use of building management systems in monitoring building performance for energy conservation programs where shared savings or performance contracts are in effect. She is also looking at BMS's for monitoring the effectiveness of electrical demand-side management. She will share her findings with us.

APRIL HONOR ROLL

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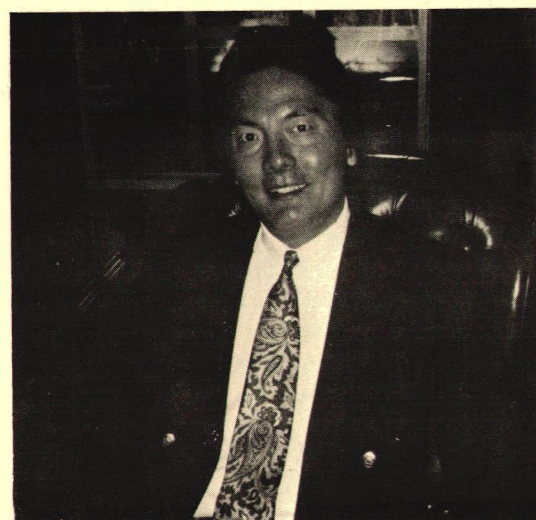
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- BOILER FEED
- CONDENSATE RETURN



PRESIDENT'S MESSAGE

March is here already and spring is just around the corner. We have been extremely fortunate to receive the much needed snowfall and rain to ease our very serious drought situation.

I would like to congratulate Rachel Murray and her husband as they will be blessed with a new baby during the month of July. Rachel is our *Fog Dispenser* Editor and she has notified me that this will be her last year as editor. Rachel, I would like to say that you have done a fantastic job and we are all truly going to miss you. You will be a hard act to follow.

It was refreshing to see a lot of new faces at our February meeting that we have not seen at our regular meetings recently. I would like to encourage those of you to continue to attend our future meetings.

Just a reminder that our Scholarship Committee will be awarding two scholarships at our April meeting. Our Seminar Committee has been working very hard to put together a

solid program for all of us, so please be on the look-out for their mailing so that you can sign up early.

Since the Board received several comments on this subject I would like to say that the Dinner Site Survey that we had at our last meeting which will be followed by a similar survey at our April meeting is just that — a survey only. These two surveys are a fact-finding mission for the Board. The information that is gathered will be reviewed by the Board after which it will be presented to the membership for further discussion.

We had an excellent turnout of 87 people at our March meeting. Let's try to top this number in April.

Once again, it's always great to see so many Past Presidents at our Chapter meetings showing their much valued support.

I look forward to seeing all of you at our April meeting.

Richard Leao

THE MARBLE DRAW

Next Month's Starting Pot: \$190.00+
 Odds: 20%
 Black Marbles Remaining: 4



NEW GOLDEN GATE CHAPTER MEMBERS

Please welcome the following members to our Chapter:

- | | |
|----------------|---------------------------|
| Joseph Olivier | Landis & Gyr |
| Bryan Frew | American Bearing & Drives |
| Ed Schommer | Carrier Corporation |
| Patrick Tang | Randall Lamb Associates |

GEOTHERMAL HEATING AND COOLING TELECONFERENCE FOR ARCHITECTS AND ENGINEERS

Sponsored by Pacific Gas & Electric and the U.S. Department of Energy:

When: Thursday, April 28, 1993
 7:45 a.m. to 11:00 a.m.
 (coffee and pastries provided)

Where: Pacific Gas & Electric
 Technical and Ecological Services
 3400 Crow Canyon Road
 San Ramon, CA

Heating, cooling, and water heating with earth energy is one of the fastest moving stories in today's world of changing technology. In fact, advances in Geothermal Heat Pump (GHP) efficiency, installation techniques, as well as reductions in installation costs make GHP's costs comparable with those of competitive heating and cooling technologies.

This special two-hour teleconference will provide technical information about GHP of interest to an audience of architects and engineers. The telecast program will include case studies of successful GHP installations in a number of different building types and climates, as well as guidelines for equipment and heat exchanger selection and sizing for different applications. Utility executives with responsibility for marketing and demand-side management will also find this teleconference useful for trade ally programs.

The teleconference is free and open to everyone. However, space is limited and reservations must be made by April 26, 1993. To reserve your space and receive more information, call Julia Oliver at (510) 273-6408.

Increase Your Professional Knowledge -
 Keep Abreast of Changing Technologies -

Attend ASHRAE's
 Professional Development Seminars (PDS)

"Air System Design & Retrofit"
 March 23-24, 1993

"Water System Design"
 March 25-26, 1993

in
 San Francisco

For a complete program brochure and registration information contact Marietta Henry at ASHRAE Headquarters (404-636-8400, Fax 404-321-5478)

FOG DISPENSER

We will need an editor for next year's *Fog Dispenser*. This is a great opportunity to become more involved in our Chapter. If you are interested, please call Rachel Murray at (415) 397-0442.

HONOR ROLL

The *Fog Dispenser* needs you! You can sign up for the Honor Roll for one of the remaining months of the 1992-93 year. Your donation of \$100 helps to pay for the publication of our monthly newsletter.

SEEKING EMPLOYMENT

Bright & Intelligent Cal Poly SLO graduate seeking an entry level Engineering position. I have experience in the HVAC field. I am computer literate, very knowledgeable with CAD systems, self-motivated and outgoing. Willing to relocate. For more information, please call Quang Vu at (408) 729-0843.

DO YOU KNOW A PROSPECTIVE NEW MEMBER?

Contact Membership Chair:
 Michael Rubio (415) 777-5333
 (415) 641-4413 FAX

MAIL, FAX or PHONE NEWS TO:

FOG DISPENSER
 Rachel Murray, Editor
 Charles M. Salter Associates, Inc.
 130 Sutter Street, Suite 500
 San Francisco, CA 94104

Telephone (415) 397-0442
 FAX (415) 397-0454

FOG DISPENSER DEADLINES

Meeting Dates	Copy Deadlines
May 6, 1993	April 19, 1993
June 3, 1993	May 11, 1993

Published monthly, October through June, by the GOLDEN GATE CHAPTER OF THE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, c/o Duplicating Associates, 370 Brannan Street, San Francisco, CA 94107

1992 — 1993 Officers

- Richard Leao *President*
 Richard Paillon *President-Elect*
 Gail Brager *Secretary*
 Roy Gifford *Treasurer*

Board of Governors

- Barbara Dilts Daniel Reiter
 Dennis Thompson

MINUTES OF THE MEETING

March 4, 1993

1. President Richard Leao called the meeting to order at 7:20 p.m. Self-introductions followed.
2. The February minutes were approved.
3. A survey was distributed to get attendees' feedback regarding preferred location(s) for Chapter meetings held in '93/'94. The options were as follows: 1) all meetings at the Engineers Club (sit-down dinner at \$25); 2) all meetings at PG&E's Pacific Energy Center (buffet dinner at \$20); 3) 50% at each place; and 4) 6 meetings at the Engineers Club & 2 at the PEC. Carl Jordan gave an eloquent pitch for keeping the meetings at the Engineers Club. It was noted the survey was for informational purposes only (i.e., no decisions will be made based solely on the results), and that it will be repeated at the April meeting. Results of both surveys will be published in the May issue of the *Fog Dispenser*.
4. Jon Wintermeyer, Chair of the Education Committee, announced that the Golden Gate Chapter will again participate in the San Francisco Bay Area Science Fair on March 25. Jon will be serving as a judge and will award a prize on our Chapter's behalf for the best exhibit illustrating principles related to heat transfer principles and HVAC.
5. Jon also described a science program at the Walden House School, where Len Pettigrew teaches about heating. Len is interested in sponsoring a high school ASHRAE Student Chapter which might be a great resource for recruiting students early into the discipline of engineering. Len has a need for older product samples and literature, as well as for members (older or younger!) willing to talk to the students about career opportunities in HVAC. Please call Len directly at (415) 558-8880, or call Jon at (415) 621-1199.
6. Richard Jackson-Gistelli described our upcoming seminar entitled "CFC Design Alternatives" taking place on May 5 at PG&E's Pacific Energy Center. The seminar promises to be informative, entertaining, and solution-oriented. The maximum cost will be \$85, with lower rates for early registration. Mark your calendar!
7. Jim Nemechek, Chair of the Nominating Committee, announced this year's slate of officers (please see enclosed ballot). He also encouraged members to be active in the Chapter and experience the fulfillment and fun of getting involved and being of service to the industry.
8. Ben Sun gave us a motivating pitch to contribute to this year's Research Fund. The awards for donations of \$75 or more are PHENOMENAL! So contribute big and contribute early!
9. PROGRAM: Our speaker was Art Rosenfeld, Director of the Center for Building Science at Lawrence Berkeley Laboratory. Art entertained us with facts and anecdotes related to a range of issues, including: global warming (and what it means to the HVAC engineer); the proposed energy tax (offering a historical and international perspective, as well as suggested alternatives); and innovative proposals for improving our nation's energy conservation and efficiency practices.

SCHOLARSHIP NEWS UPDATE

There were seven applicants for the two scholarships. The two awards will be given out at the April meeting. I would like to thank the Scholarship Committee: Dart Rinefort, Don Bryant, Carl Jordan and Gary Harbison for selecting the recipients. Also, thanks to all the members who donated to the Scholarship Fund.

Debi May
Scholarship Committee Chair

MEMBER NEWS

G. Robert Voelz has been appointed to the San Francisco Code Advisory Committee. Tom Simonson has been appointed as an alternate to this committee.

ASHRAE GOLDEN GATE CHAPTER

**DINNER RESERVATION FAX FOR
THURSDAY, APRIL 1, 1993**

Please send Fax by **noon** on TUESDAY, March 30

TO: RICHARD PAILLON, Randall Lamb Associates
FAX NO.: (415) 512-8940

Phone: (415) 512-9771
Please call if you have any last minute changes in plans.
Please cancel your reservation(s) if you cannot attend the meeting.

Please make _____ reservation(s). Following are the names of those who will attend:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
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_____	_____
_____	_____

FAX EARLY!

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COMPANY: _____ PHONE: _____

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Richard Paillon	PRESIDENT-ELECT
Gail Brager	SECRETARY
Roy Gifford	TREASURER

BOARD OF GOVERNORS

Barbara Dilts
Daniel Reiter
Dennis Thompson

COMMITTEES AND CHAIRPERSONS

ATTENDANCE	Roy Gifford	MARBLES GAME
AUDITING	Hendrik Mouw	MEMBERSHIP
AWARDS	Jack Kniveton	PRODUCT SHOW
BAEC	Tom Reinarts	PROGRAM
CODE	Robert Braun	PUBLICITY
CRC ACTION	Richard Paillon	RECEPTION
EDUCATION	Jon Wintermeyer	REFRIGERATION
ENERGY & TECHNICAL	Mark Hydeman	RESEARCH PROMOTION
FOG DISPENSER	Rachel Murray	ROSTER
GOLF	Mark Luckes	SF ADMIN. CODE
GOVERNMENT AFFAIRS	Robert Braun	SCHOLARSHIP
HISTORIAN	Robert Phillips	SEMINAR
HONOR ROLL	Tim Provo	TENNIS

Tim Provo
Michael Rubio
Brad Gustafson
Richard Paillon
Ellen Pierce
Sal Giglio
Lewis Brooks
Ben Sun
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Debi May
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FOG DISPENSER



Golden Gate Chapter

ASHRAE

VOLUME XXXII • NUMBER 5

FEBRUARY 1993

MEETING NOTICE

DATE: Thursday, February 4, 1993
SOCIAL HOUR: 5:30 p.m.
DINNER: 6:30 p.m.
LOCATION: Engineers Club
 160 Sansome Street
 17th Floor
 San Francisco, CA

POST: \$25.00

NOTE: Please phone or fax your dinner reservation to Richard Paillon by noon on Tuesday. A fax form is enclosed for your convenience.

PHONE: (415) 512-9771

FAX: (415) 512-8940

FEBRUARY PROGRAM

PROGRAM: State-of-the-Art Absorption Chillers and Their Application

SPEAKER: Ben Schlinsog, Snyder General Corporation

Mr. Schlinsog is an ASHRAE member. He has been employed by Snyder General/McQuay for 15 years and is their Western Regional Sales Manager.

He will explain the various types of absorption chillers including the newest "double effect" machines. He will tell us about the conditions that make such units attractive to us, and give us details on how to best apply absorption chillers.

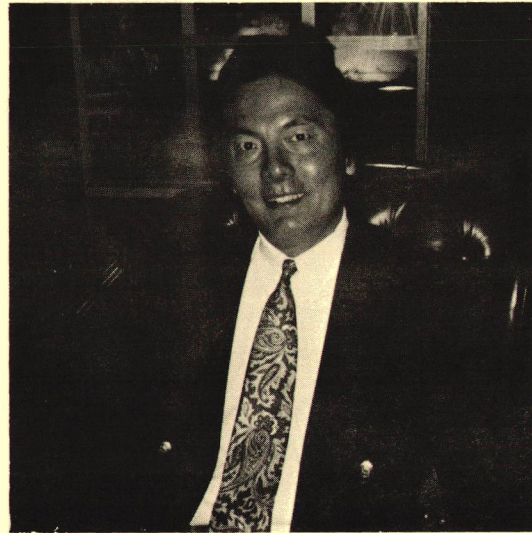
This promises to be a rewarding technical presentation.

FEBRUARY HONOR ROLL

Carl H. Jordan *Consulting Mechanical Engineer*

646 Colusa Avenue
 Berkeley, California 94707-1518
 (510) 524-9071

Thank you for your referrals for the last four years.



PRESIDENT'S MESSAGE

Once again, we had an excellent turn-out for our January meeting. It's a great way to start the new year. It was a pleasure to have Dick Charles, our Society President, update us with a glimpse of what is going on internationally within ASHRAE.

I'd like to remind all of you again about the upcoming U.C. Berkeley extension classes, and if you have any questions, please contact Mark Hydeman.

Please remember that Ernie French, our Seminar Chair, is looking for your input regarding the topics that he and his committee is currently considering for our Golden Gate ASHRAE Seminar.

John McGowan, our Program Speaker, gave us a very interesting and informative overview of Direct Digital Controls today and the possibilities for the future.

And last, but not least, per Tom White's head count, 13 past presidents were present at the January meeting. This

definitely speaks very highly of the continuing support and commitment from these individuals that our Chapter is very fortunate to have.

I look forward to seeing all of you at our February meeting at the Engineers Club.

Richard Leao

THE MARBLE DRAW

Next Month's Starting Pot	\$106.00+
Odds	14.29%
Black Marbles Remaining	6



SCHOLARSHIPS AVAILABLE

This year the Golden Gate Chapter will be offering two scholarships again: The Eric Thor Andresen Memorial Scholarship for \$500 and the Golden Gate Chapter Scholarship for \$750. Both are available to San Francisco State and UC Berkeley students. For more information and an application, contact: Debi May, Scholarship Chair, at (415) 467-8680; Gail Brager, UC Berkeley, at (510) 642-1692; or Ahmad Ganji, San Francisco State, at (415) 338-7736. Any donations from Golden Gate Chapter members will be appreciated. Send your donations before February 15 to: Debi May, Tempco Equipment Co., P.O. Box 400, Brisbane, CA 94005. Make checks payable to Golden Gate ASHRAE.

AWARDS TO MEMBERS

The Linford Company won first place awards in three categories in the Contracting Business 1992 Design Build Award Contest. These awards were given for their work on Raychem CPD, 475 Sansome Building and Westmont College.

Although this is late mention, it is noteworthy to acknowledge that Glenn Friedman of Engineered Air Systems won this award in 1991. This award was given for the use of an evaporative cooler and an air-to-air heat exchanger on a 100% outside air system for the Oaks Club. This system reduced the connected load from 40 tons to 15 tons.

BERKELEY OFFERS HVAC-R CURRICULUM

UC Berkeley Extension and the Golden Gate Chapter of ASHRAE have developed a four-course curriculum intended to provide the basic background in HVAC principles and applications required for work with HVAC systems. On successful completion of the courses, a certificate of accomplishment is awarded by the Golden Gate Chapter of ASHRAE.

The courses include "Air Conditioning and Heating Psychrometry," "Heating and Air Conditioning Systems Design," "Refrigeration Concepts," and "Design Considerations in Air Conditioning and Heating Systems."

This term, "Heating and Air Conditioning Systems Design" will be offered on Tuesday, February 2 through April 20 from 7:00 to 9:30 p.m. at UC Extension Downtown, 150 Fourth Street (near Moscone Center at Howard). The fee is \$295.

The instructor will be Mark Hydeman, a Senior Engineer at Eley Associates, San Francisco. He is actively involved in the development of California's Title 24 Commercial Energy Standard and ASHRAE's Standard 90.1 Commercial Energy Standard.

The HVAC-R curriculum is coordinated by Donald Bryant, Sr., an emeritus faculty member of City College of San Francisco and Fellow of ASHRAE. For more information, call Continuing Education in Engineering, UC Berkeley Extension, (510) 642-4151.

EIT REVIEW CLASS AT SFSU

San Francisco State University is offering a seven-week evening review class for the upcoming Engineer-in-Training (EIT) exam April 17, 1993. The class will meet on Mondays and Wednesdays, 7:00 - 9:45 p.m., from February 15 to March 31. Students taking the class will be eligible for 4.2 units of CEU credit.

For registration information, contact Extended Education at (415) 338-1373. For more information about the course, contact Dr. Ganji at (415) 338-7736.

OTHER UPCOMING SFSU COURSES

San Francisco State University Extended Education Construction Practices Certificate Program is offering a variety of interesting courses and seminars for Spring 1993. Two seminars will be instructed by Glenn Cheek of The Brooks Group, Danville, that will cover Management Practices in Construction and Project Delivery Strategies. Other courses and seminars cover project management, materials and processes, claims and change orders, and the legal aspects of the construction industry. For more information on courses and enrollment please contact San Francisco State University at (415) 338-1372.

SFSU OFFERS FREE ENERGY AUDITS

Thanks to a contract with University City Science Center of Philadelphia, under the auspices of the Department of Energy, SFSU's Division of Engineering will soon be offering a free new service to small and medium sized manufacturers. Under this program, engineering faculty and student teams in the newly created Energy Analysis and Diagnostic Center (EADC) will conduct energy audits for interested manufacturers. The teams will conduct a one day visit at a mutually agreeable time, look at the plant's processes, and perform measurements related to energy usage.

Following an analysis, the team will prepare a report recommending ways to reduce energy consumption, including estimated costs and payback period for implementation. Clients do not have to pay for this service and are under no obligation to implement the recommendations.

In addition to providing a service to manufacturers, the EADC program is designed to enrich the educational experience of engineering faculty and students by involving them with the industry.

For information on the EADC, call (415) 338-6218 or write to the administrator, Ron Trauner, at the following address:

Energy Analysis and Diagnostic Center
Division of Engineering
San Francisco State University
1600 Holloway Avenue
San Francisco, CA 94132

EMPLOYMENT OPPORTUNITY

Director Mechanical Engineering: A&E firm in San Francisco needs licensed ME with 10-15 years experience and strong project management skills to manage engineering department. Compensation up to \$80,000 plus benefits and bonuses. Send resume with salary history to:

Patrick Bell & Co.
166 Los Cerros Dr.
San Luis Obispo, CA 93405
or fax to: (805) 542-9631

DO YOU KNOW A PROSPECTIVE NEW MEMBER?

Contact *Membership Chair:*
Michael Rubio (415) 777-5333
(415) 641-4413 FAX

MAIL, FAX or PHONE NEWS TO:

FOG DISPENSER
Rachel Murray, *Editor*
Charles M. Salter Associates, Inc.
130 Sutter Street, Suite 500
San Francisco, CA 94104

Telephone (415) 397-0442
FAX (415) 397-0454

FOG DISPENSER DEADLINES

Meeting Dates	Copy Deadlines
March 4, 1993	February 15, 1993
April 1, 1993	March 15, 1993
May 6, 1993	April 19, 1993
June 3, 1993	May 17, 1993

Published monthly, October through June, by the GOLDEN GATE CHAPTER OF THE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, c/o Duplicating Associates, 370 Brannan Street, San Francisco, CA 94107

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Richard Paillon *President-Elect*
Gail Brager *Secretary*
Roy Gifford *Treasurer*

Board of Governors

Barbara Dilts Daniel Reiter
Dennis Thompson

MINUTES OF THE MEETING

January 7, 1993

1. The meeting was called to order at 7:20 p.m. Self-introductions followed (Tom White announced that we had 13 past presidents attending our meeting that night).
2. The December meeting minutes were approved.
3. Dick Charles asked that all 13 past presidents stand so that the Chapter could give them recognition. He then spoke for a few minutes about the joys of being involved at both the Chapter and Society levels, sharing some of his experiences as Society President. He also announced that the Winter Exposition in Chicago this month will be the biggest that ASHRAE has ever held.
4. Mark Hydeman announced that the new U.C. Extension class he will teach, "Heating and Air Conditioning Systems Design," begins February 2. There is an enrollment limit of 51 people, so he encouraged people to enroll early, or to please tell other people in your companies.
5. Debi May thanked people for their donations to the Scholarship Funds. She reminded people to pass the news on to students that February 15 is the deadline for the two ASHRAE scholarships we have available.
6. Ernie French is Chair of the Seminar Committee, which now consists of Mike Scofield, Richard Jackson-Gistelli and John Stoltz. They have narrowed potential topics down to the following three: 1) CFC Design Alternatives; 2) Laboratory Design; and 3) Industrial Ammonia Refrigeration. If you have feedback, please contact one of the committee members.
7. Gail Brager announced that Engineers Week is in February and we should begin thinking about possible activities that we can do to encourage young people to consider engineering, and the HVAC industry in particular, as a career opportunity. Jon Wintermeyer, Chair of the Education Committee, will be spearheading the efforts and invites any suggestions.
8. Ben Sun presented an award to the following Golden Gate Chapter members who made major contributions to ASHRAE research last year. The following people donated between \$250-\$499 and received a certificate: Edward Arens, E.B. Ward Co., G.M. Lim & Associates, Mechanical Contractor Association of Northern California, and R.F. MacDonald Co. The following people donated at least \$500 and received a plaque: ECS (Flack + Kurtz) Associates, L.L. Roy Gifford, Thomas A. Gilbertson & Associates, the Brose Co., and Richard A. Charles. The Chapter thanks you all! And a special warning from Ben—his phone calls are coming soon, so take an opportunity to donate now to avoid getting harassed later!
9. On another research note, Dick Charles announced that this is the first year we've had more projects to fund than money to give away and the Society will be doing its own deficit spending. So please give generously.
10. Roy Gifford read a letter of gratitude written by the Board to Tom White for his efforts in campaigning for a future ASHRAE meeting to be held in San Francisco. We'll await word from Society following the January '93 meeting. The letter was accompanied by a check for reimbursement of telephone expenses, which Tom immediately and generously endorsed over to the ASHRAE Scholarship Fund.
11. Dennis Thompson drew the lucky raffle number, but (alas!) he drew the black marble. The pot grows as the blue marble awaits the next lucky person.
12. PROGRAM: John McGowan, from Honeywell Applied Systems Marketing, spoke about the latest trends and developments in building automation systems and direct digital control. His presentation was informative and timely, and was followed by a lively discussion.
13. Rick Paillon thanked people for being timely in making their reservations and conscientious in calling in any cancellations. He encouraged everyone to continue this practice.
14. The January meeting will again be held at the Engineer's Club. The subject will be refrigeration.
15. The meeting was adjourned at 9:05 p.m.

FUTURE PROGRAMS:

- March: David Goldstein, National Resources Defense Fund; Ozone Depletion and Other Environmental Issues.
- April: Kristin Heinemeier, U.C. Berkeley student; Research on Energy Control Management.

HONOR ROLL

The *Fog Dispenser* needs you! You can sign up for the Honor Roll for the 1992-93 year. Your donation of \$100 helps to pay for the publication of our monthly newsletter.

Thanks to a request from one of our members, the Board has decided on a consistent format for the Honor Roll to include your name, address, phone and fax numbers, key people, company logo, and a one-line description of your business (optional). Call Tim Provo soon for the month of your choice at (415) 579-5522.

ASHRAE GOLDEN GATE CHAPTER

**DINNER RESERVATION FAX FOR
THURSDAY, FEBRUARY 4, 1993**

Please send Fax by noon on TUESDAY, February 2

TO: RICHARD PAILLON, Randall Lamb Associates
FAX NO.: (415) 512-8940

Phone: (415) 512-9771

Please call if you have any last minute changes in plans.

Please cancel your reservation(s) if you cannot attend the meeting.

Please make 2 reservation(s). Following are the names of those who will attend:

<u>RICHARD CHARLES</u>	_____
<u>PAUL D'NEIL</u>	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

FAX EARLY!

PLEASE MAKE CHECKS PAYABLE TO "ASHRAE"

SIGNATURE: RL & Chl

COMPANY: CHARLES & BRAUN PHONE: 415 442-0110

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Richard Leao PRESIDENT
 Richard Paillon PRESIDENT-ELECT
 Gail Brager SECRETARY
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 HISTORIAN
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 Hendrik Mouw
 Jack Kniveton
 Tom Reinarts
 Robert Braun
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 Mark Hydeman
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 SEMINAR
 TENNIS

Tim Provo
 Michael Rubio
 Brad Gustafson
 Richard Paillon
 Ellen Pierce
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 Pete Johnson
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Golden Gate Chapter



ASHRAE

VOLUME XXXII • NUMBER 4

JANUARY 1993

MEETING NOTICE

DATE: Thursday, January 7, 1993
SOCIAL HOUR: 5:30 p.m.
DINNER: 6:30 p.m.
LOCATION: Engineers Club
 160 Sansome Street
 17th Floor
 San Francisco, CA
COST: \$25.00
NOTE: Please phone or fax your dinner reservation to Richard Paillon by noon on Tuesday. A fax form is enclosed for your convenience.
PHONE: (415) 512-9771
FAX: (415) 512-8940

JANUARY PROGRAM

PROGRAM: Distributed Direct Digital Control for the 1990's
SPEAKER: John J. McGowan, Honeywell Applied Systems Marketing.
 Mr. McGowan has 14 years of experience in the energy industry. He has published four books on controls and building automation. He was The Association of Energy Engineer's "Energy Professional of the Year for the Western United States" for 1991. He lives in Albuquerque, New Mexico.
 Mr. McGowan will speak on the latest trends and developments in building automation systems and direct digital control.

JANUARY HONOR ROLL

APPLIED AIR FILTERS

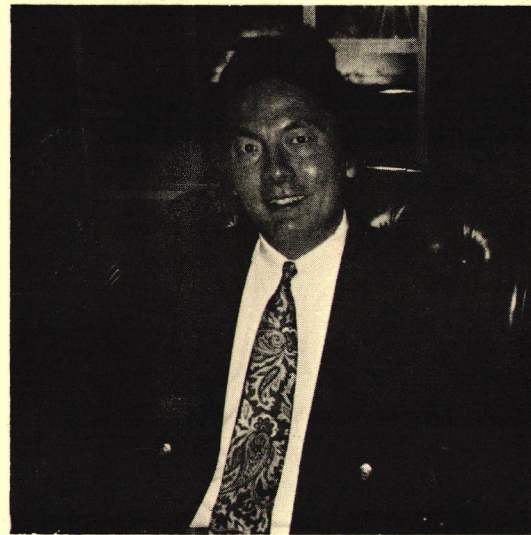
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 Brian Bara
 Andrew Titus
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 Arthur Sapp
 Jim Kanomata
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 Side Access Filter Housings -Standard - HEPA - Carbon
 Cleanroom Equipment

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FAX: (408) 749-0338



PRESIDENT'S MESSAGE

We had a very nice turnout for our December meeting. Eric Thompson of the Environmental Defense Fund provided us with an informative program that led to an interesting question and answer period.

It's never too late. Our committee chairs are still looking for volunteer members, so I encourage you to please contact them for the committee you would like to work on. Congratulations to Kristin Heinemeir for winning the ASHRAE Travel Grant for the winter meeting in Chicago coming up in January. Since this is our first Golden Gate/ASHRAE Travel Grant, we want it to be successful so that we can continue it in the future.

A big hearty welcome to our new chapter members Angelo Dominguez and Wayne Humphrey.

And for those who were not able to make it to the December meeting, you missed seeing Ed DeGuzman pick the right marble and, in doing so, win the Grand Prize! Congratulations to Ed on receiving an early Christmas present!

Time moves quickly when you're having fun, and this year is almost over with. As the holiday season approaches, I would like to thank all of you, Board Members and Chapter

Members, for all of your support. I would like to wish all of you a very happy holiday season and a prosperous and healthy new year.

Looking forward to seeing all of you next year.

Richard Leao

THE MARBLE DRAW

WE HAVE A WINNER! Edgar DeGuzman of ACCO won \$342 at our December 1992 meeting. Congratulations!

Next Month's Starting Pot	\$50.00+
Odds	12.5%
Black Marbles Remaining	7



SCHOLARSHIPS AVAILABLE

This year the Golden Gate Chapter will be offering two scholarships again: The Eric Thor Andresen Memorial Scholarship for \$500 and the Golden Gate Chapter Scholarship for \$750. Both are available to San Francisco State and UC Berkeley students. For more information and an application, contact: Debi May, Scholarship Chair, at (415) 467-8680; Gail Brager, UC Berkeley, at (510) 642-1692; or Ahmad Ganji, San Francisco State at (415) 338-7736. Any donations from Golden Gate Chapter members will be appreciated. Send your donations before February 15 to: Debi May, Tempco Equipment Co., P.O. Box 400, Brisbane, CA 94005. Make checks payable to Golden Gate ASHRAE.

NEW GOLDEN GATE CHAPTER MEMBERS

Please welcome the following members to our Chapter:

- | | |
|--------------------------|------------------------|
| Selden Parmelee | Bayside HVAC Products |
| Robert F. Levi | Carrier Corporation |
| Matthew Murphy | Mechanical Supply Inc. |
| Richard Jackson-Gistelli | Sandia National Labs |

THERMAL ENERGY STORAGE DESIGN

Learn how to design and apply effective thermal energy storage to save electric energy, demand and reduce operating costs.

Dates: January 13-14, 1993 in San Francisco
Sponsored by PG&E in conjunction with the Thermal Storage Applications Research Center at the University of Wisconsin.

\$75.00 Fee: (All attendees will earn Continuing Education Units)

This course will present plant and system design and selection criteria for air conditioning systems using thermal energy storage. Training will concentrate on air conditioning systems for commercial building comfort systems; however, the principles and technologies discussed will also apply to process load applications.

For More Information:

To receive registration information, fax a copy of your business card to John Goodin, PG&E's Thermal Energy Storage Program Manager, at (415) 972-6950 or call him at (415) 973-4413. Call now; enrollment is limited.

EIT REVIEW CLASS AT SAN FRANCISCO STATE UNIVERSITY

San Francisco State University is offering a seven-week evening review class for the upcoming Engineer-in-Training (EIT) exam April 17, 1993. The class will meet on Mondays and Wednesdays, 7:00 - 9:45 p.m., from February 15 to March 31. Students taking the class will be eligible for 4.2 units of CEU credit.

For registration information, contact Extended Education at (415) 338-1373. For more information about the course, contact Dr. Ganji at (415) 338-7736.

SAN FRANCISCO STATE UNIVERSITY OFFERS FREE ENERGY AUDITS

Thanks to a contract with University City Science Center of Philadelphia, under the auspices of the Department of Energy, SFSU's Division of Engineering will soon be offering a free new service to small and medium sized manufacturers. Under this program, engineering faculty and student teams in the newly created Energy Analysis and Diagnostic Center (EADC) will conduct energy audits for interested manufacturers. The team will conduct a one day visit at a mutually agreeable time, look at the plant's processes, and perform measurements related to energy usage.

Following an analysis, the team will prepare a report recommending ways to reduce energy consumption, including estimated costs and payback period for implementation. Clients do not have to pay for this service and are under no obligation to implement the recommendations.

Eligible firms must meet three of the four following criteria: This service is intended solely for small to medium sized manufacturers within 150 miles of San Francisco with fewer than 500 employees and less than \$75,000,000 gross sales per year for a given plant. The manufacturer's energy bill must be \$1.75 million or less and there must be a lack of in-house energy expertise at the plant. If firms meet three of these four criteria, they are eligible for this service. This program is not intended to duplicate similar services available from other sources.

There are 21 other EADC's in operation across the country at universities with ABET-accredited engineering programs. In addition to providing a service to manufacturers, the EADC program is designed to enrich the educational experience of engineering faculty and students by involving them with the industry.

For information on the EADC call (415) 338-6218 or write to the administrator, Ron Trauner, at the following address:

Energy Analysis and Diagnostic Center
Division of Engineering
San Francisco State University
1600 Holloway Avenue
San Francisco, CA 94132

DO YOU KNOW A PROSPECTIVE NEW MEMBER?

Contact *Membership Chair:*
Michael Rubio (415) 777-5333
(415) 641-4413 FAX

MAIL, FAX or PHONE NEWS TO:

FOG DISPENSER
Rachel Murray, *Editor*
Charles M. Salter Associates, Inc.
130 Sutter Street, Suite 500
San Francisco, CA 94104

Telephone (415) 397-0442
FAX (415) 397-0454

FOG DISPENSER DEADLINES	
Meeting Dates	Copy Deadlines
February 4, 1993	January 18, 1993
March 4, 1993	February 15, 1993
April 1, 1993	March 15, 1993
May 6, 1993	April 19, 1993
June 3, 1993	May 17, 1993

Published monthly, October through June, by the GOLDEN GATE CHAPTER OF THE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, c/o Duplicating Associates, 370 Brannan Street, San Francisco, CA 94107

1992 — 1993 Officers

Richard Leao *President*
Richard Paillon *President-Elect*
Gail Brager *Secretary*
Roy Gifford *Treasurer*

Board of Governors

Barbara Dilts Daniel Reiter
Dennis Thompson

MINUTES OF THE MEETING

December 3, 1992

1. The meeting was called to order at 7:30 p.m. Self-introductions followed.
2. The November meeting minutes were approved.
3. The Chapter observed a moment of silence for the passing away of member **Ivan Tomasi**.
4. Debi May mentioned that February 15 is the deadline for the two ASHRAE scholarships we have available — the \$500 Eric Thor Andresen Scholarship and the \$750 Golden Gate Scholarship.
5. Ernie French is organizing the seminar this year and asked Chapter members for ideas for seminar topics and for volunteers to help out.
6. Rich announced that Kristin Heinemeier received our first Golden Gate Student Travel Award to pay for her airfare to the Chicago Winter Meeting in January '93. Many thanks to Jon Wintermeyer as Education Committee Chair for his efforts to this end.
7. Ben Sun, our Research Chair, announced that we are currently at 7% of our annual goal for research donations. This will jump to 14% after he receives a check for one more additional pledge. **We want this to be a strong year for Golden Gate research donations, so please give generously. Contact Ben Sun.**
8. Dale Yager has pre-registration forms for the Chicago Winter Meeting, January 25-28. The deadline for early registration, January 1, is approaching fast!
9. Frank Mayhew thanked Norman Wright Mechanical Equipment Corp. for the check to the Cal Poly endowment fund.
10. Edgar DeGuzman won the \$342 pot of the marble draw. **Congratulations!!!**
11. **PROGRAM:** Eric Thompson from the Environmental Defense Fund spoke about the work at EDF, investigating environmental problems to find solutions that are best for all groups affected. Some of these issues include ozone, recycling, global warming, acid rain, water issues, toxics, Antarctica, wildlife habitat, etc. EDF also educates utilities on alternatives to investing in new power plants, and was instrumental in working with PG&E to start efficiency programs.
12. The January meeting will again be held at the Engineers Club, and the speaker will be Jack McGowan from Honeywell Applied Systems Marketing, talking about DDC controls.

FUTURE PROGRAMS:

- February: **Bill Dietrich, McQuay Corporation**
Double Effect Absorption Chillers.
- March: **David Goldstein, National Resources Defense Fund; Ozone Depletion and Other Environmental Issues.**
- April: **Kristin Heinemeier, U.C. Berkeley student; Research on Energy Control Management.**

CAREER OPPORTUNITIES FAIR

The Educational Activities Committee believes that one of the very best ways to promote HVAC&R to students is to demonstrate the variety of companies and career opportunities which are available within the industry. During ASHRAE's Winter meeting in Chicago, the committee will host a Career Opportunities Fair for students.

This event is scheduled for Sunday, January 24, 1993 from 2:00 p.m. to 4:00 p.m. at the Palmer House Hotel in Chicago. During this program, industry representatives will have the opportunity to talk with students about the type of career options open to new graduates. This event will help the industry become aware of the type of courses and training that students are receiving and students will learn which courses and skills are important to the industry.

Whether you represent a small consulting firm, a large manufacturing company, a utility or virtually any other company which is involved in some aspect of HVAC&R, the Educational Activities Committee invites you to participate in this important event.

There is no charge for booth space, but you must register in advance. To register or for more information, please contact Anne Forbes at ASHRAE Headquarters, 1791 Tullie Circle, Atlanta, GA 30329, (404) 636-8400, FAX (404) 321-5478.

HONOR ROLL

The *Fog Dispenser* needs you! You can sign up for the Honor Roll for the 1992-93 year. Your donation of \$100 helps to pay for the publication of our monthly newsletter.

Thanks to a request from one of our members, the Board has decided on a consistent format for the Honor Roll to include your name, address, phone and fax numbers, key people company logo, and a one-line description of your business (optional). Call Tim Provo soon for the month of your choice at (415) 579-5522.

ASHRAE GOLDEN GATE CHAPTER

**DINNER RESERVATION FAX FOR
THURSDAY, JANUARY 3, 1992**

Please send Fax by **noon** on TUESDAY, January 5

TO: RICHARD PAILLON, Randall Lamb Associates
FAX NO.: (415) 512-8940

Phone: (415) 512-9771

Please call if you have any last minute changes in plans.

Please cancel your reservation(s) if you cannot attend the meeting.

Please make 3 reservation(s). Following are the names of those who will attend:

DICK CHARLES

IGOR TARTAKOVSKY

PAUL O'NEIL

FAX EARLY!

PLEASE MAKE CHECKS PAYABLE TO "ASHRAE"

SIGNATURE: Bill A. Chalmers

COMPANY: CHARLES & BREW

PHONE: 415 442 0110

OCTOBER HONOR ROLL

TEMPCO Equipment Company, Inc.

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*Chuck Shane, *Eric Tinglof, *Doug Herbert, *Ron Yaffe, Dan Barrango, Arian Sorkhabi
Andre Shinshiro, Siavash Karrobi, Tony Supnet, and Gladys Mendoza

* = GOLDEN GATE CHAPTER ASHRAE Member

**OCTOBER PROGRAM: THE BUILDING COMMISSIONING PROCESS
A PANEL DISCUSSION
SEE PAGE 1 FOR DETAILS**



Golden Gate Chapter
ASHRAE
370 Brannan Street
San Francisco, CA 94107



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Richard A. Charles
Charles & Braun
150 Spear Street
San Francisco, CA 94105

RECEIVED
OCT - 4 1993
CHARLES & BRAUN

FOG DISPENSER

Golden Gate Chapter



ASHRAE

OCTOBER 1993

VOLUME XXXIII • NUMBER 1

MEETING NOTICE

DATE: Thursday, October 7, 1993
SOCIAL HOUR: 5:30 p.m.
DINNER: 6:30 p.m.
LOCATION: Engineers' Club
160 Sansome St. 17th Floor
San Francisco, CA
(415) 421-3184
COST: \$25.00
TO RESERVE: Please phone or fax your dinner reservation to Gail Brager by Tuesday prior to the meeting. A fax form is enclosed for your convenience.
PHONE: (510) 642-1696
FAX: (510) 643-5571

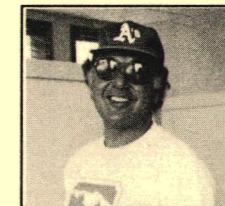
SEE FAX FORM FOR PARKING INFORMATION

OCTOBER PROGRAM

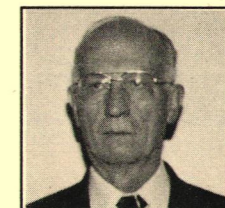
PROGRAM: The Building Commissioning Process
A Panel Discussion

There seems to be consistent agreement within the HVAC industry on two points concerning system commissioning: 1) that there is need for system commissioning at the end of construction, and 2) that commissioning is rarely being done. There is less agreement, however, about who should do it, who should pay for it, and whether adequate guidelines exist for how to do it. The members of this panel discussion will offer their own opinions on this subject from different perspectives. The format will encourage audience participation, and we invite Chapter members to bring their own stories and opinions to contribute to what will certainly be a dynamic and informative evening.

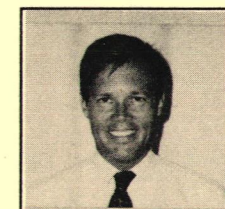
SPEAKERS: Leo Copper, Climate Mechanical
Roy Gifford, Stolte, Inc.
Brad Gustafson, Pacific Gas & Electric
Brent Martin, P.M. Realty Group



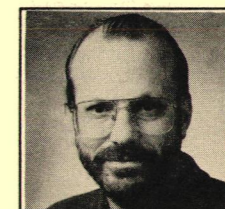
Leo Copper is the owner of Climate Mechanical. His commissioning projects have included emergency rooms, surgery suites, isolation rooms, computer facilities, schools and office buildings.



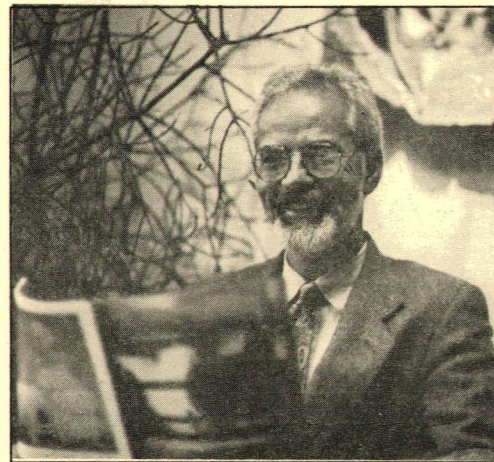
Roy Gifford is a general contractor with Stolte. He has experience in control system design, and he has commissioned numerous large projects as a design engineer, mechanical contractor, and mechanical/electrical coordinator.



Brad Gustafson is the HVAC Program Coordinator for PG&E's Pacific Energy Center. He has commissioned the PEC, develops commissioning case studies, and provides technical assistance for commissioning projects.



Brent Martin is the Chief Building Engineer for PM Realty Group. He has overseen several plant start-ups, has received awards for energy savings, and has insight into how to sell commissioning to management.



PRESIDENT'S MESSAGE

I am looking forward to having this next year be one of positive change for the Golden Gate Chapter. It is my goal to see membership and meeting attendance increase. We can accomplish this through increased membership involvement and by improving the quality of our monthly programs. During the summer the Golden Gate Chapter board met four times to plan for the upcoming year. We invited committee chairs to attend two of the board meetings. We distributed resource material to the chairs to help them perform their duties and asked them to write down some goals for their committees.

Our work with the committee chairs was the beginning of our effort to get members more involved. Because the chairs will

be setting ambitious goals for their committees, they will need help from other members. This is your chance to become involved. We will be asking for members to join committees and perhaps become co-chairs. By volunteering for a committee, you will not only contribute to ASHRAE's success but you will gain valuable experience and professional contacts.

Gail Brager, our program chair, is developing some exciting presentations for our meetings. She began her planning by surveying the membership last spring to find out about your interests. She will also be involving members of the energy and technical committees in preparing presentations. October's program will be a preview of the interesting and educational programs to come.

Many of the ideas that are guiding our planning came from attending the Chapters Regional Conference last spring. I cannot express how valuable the conference is for obtaining the skills to be a chapter officer. I encourage all of you who are enthusiastic about ASHRAE, and especially the committee chairs, to put next spring's Chapters Regional Conference on your calendars. It will take place in San Diego from May 4 through 7. Financial support will be available to help delegates and chairs attend CRC. There may be money available to help others attend. Please inquire if you are interested.

You can help us achieve our goals. Just tell your co-workers about this fall's first ASHRAE meeting. They don't have to be members, just encourage them to attend. I look forward to seeing you all there.

Richard Paillon

ASHRAE GOLDEN GATE CHAPTER 1993-1994 COMMITTEES AND CHAIRPERSONS

Attendance.....Richard Charles	Awards.....Jack Kniveton	Auditing.....Hank Mouw
BAEC.....Tom Reinarts	Code.....Bob Voelz	CRC Action.....Gail Brager
Education.....Mark Hydeman	Energy & Tech.....Peter Turnbull	Fog Dispenser.....Richard Nagy
Golf.....Mark Luckes	Government Affairs.....Jon Wintermeyer	Historian.....Bob Phillips
Honor Roll.....Tom Reinarts	Marble Game.....Tim Provo	Membership.....Michael Rubio
Product Show.....Brad Gustafson	Program.....Gail Brager	Publicity.....Sal Giglio
Reception.....Steve Doberstein	Refrigeration.....Jim Davis	Research.....Marie Madden
Roster.....Jim Taylor/Tim Provo	Scholarship.....Debi May	Seminar.....Richard Gistelli
Tennis.....Rich Leao		

DO YOU KNOW A PROSPECTIVE NEW MEMBER?

Contact *Membership Chair*:
 Michael Rubio (415) 777-5333
 (415) 641-4413 FAX

MAIL, FAX or PHONE NEWS TO:
 FOG DISPENSER
 Rick Nagy, *Editor*
 Murakami & Myers Engineers
 750 Davis Street
 Santa Rosa, CA 95401
 Telephone (707) 546-1332
 FAX (707) 546-5733

FOG DISPENSER DEADLINES

Meeting Dates	Copy Deadlines
October 7, 1993	September 13, 1993
November 4, 1993	October 15, 1993
December 2, 1993	November 12, 1993
January 6, 1994	December 17, 1993
February 3, 1994	January 14, 1994
March 3, 1994	February 11, 1994
April 7, 1994	March 18, 1994
May 5, 1994	April 15, 1994
June 2, 1994	May 13, 1994

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1993-1994 OFFICERS

Richard Paillon President
 Gail Brager President-Elect
 Roy Gifford Secretary
 Dennis Thompson Treasurer

Board of Governors

Richard Leao Ernie French
 Dan Reiter

ASHRAE TENNIS TOURNAMENT

After suffering a rain cancellation on June 4, 1993, Said Nazeri put together a very successful tennis tournament for July 16, 1993, at Golden Gate Park. Kevin Dowling was awarded the trophy for best player in the "A" Group, while Joe Norgaard took top honors in the "B" Group.



Breakfast and Tennis at Golden Gate Park

INDUSTRY NEWS

The ENERGY FORUM ALLANCE is sponsoring the Northern California Energy Forum '93 and Vendor Fair to be held October 28, 1993 at the Sacramento Holiday Inn/Beverly Garland. The ENERGY FORUM ALLANCE is made up of the Sacramento Valley Chapters of the Association of Energy Engineers (AEE), the Association of Professional Energy Managers (APEM) and the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE). Admission is \$35 and includes lunch with half-day concurrent sessions on techniques and technologies in energy efficiency and all day exhibits. For more information call 916-974-1381.

Would you like to be included in the Register of Experts and Consultants, published by the San Francisco Bar Association? Registration Fee: \$150, Publication Date: January, 1994. For information contract Nancy McDonald, 415-764-1600.

UC Berkeley Extension is offering an evening review course for the upcoming Engineer-in-Training (EIT) exam April 16, 1994. The class will meet on Mondays, 7:00-9:00 pm, from November 15 to March 20. For information call 510-642-4151.

Indoor Environmental Engineering (IEE) is sponsoring a IAQ Workshop in San Francisco on October 28 & 29, 1993. "Diagnosing and Mitigating Indoor Air Quality Problems". Fee: \$685 for ASHRAE members. For information call Chad Pfohl, at 415-567-7700, Fax 415-567-7763.

TRAINING FROM TRAIN

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Take advantage of the programs Trane has to offer. The more informed you are about your market, the better trained you are, the better decisions you can make for the 90's.

Available Courses	Intended Audience	Date
Designing Quiet Air Handling Systems	High Level HVAC Designers	11/8 - 9
Advanced Air Conditioning Clinic - Systems	High Level HVAC Designers	9/22 & 29 - 10/6 & 13
Refrigeration System Equipment Room Design	System Designers, Design Build Contractors, Engineers, Owners, & Code Officials	10/28
Refrigerant Transition & Recovery Certification	HVAC Service & Maintenance Technicians	10/19 & 22
High Pressure Service (A Valued-Added Certification Supplement)	HVAC Service & Maintenance Technicians	10/20
Low Pressure Service (A Valued-Added Certification Supplement)	HVAC Service & Maintenance Technicians	10/21
VariTrac/Tracker - Design	Engineers & Contractors	11/5
VariTrac/Tracker - Start-up & Troubleshooting	Contractors, Operators, & Maintenance Technicians	11/5

For more information, circle the class(es) of interest and FAX to (408)481-3666.

Pacific Coast Trane Company
 Attn: David Fiala, Director of Training.

Please feel free to give David Fiala your ideas on future course offerings and an idea of how many from your firm would attend your desired prospective course.

ASHRAE GOLDEN GATE CHAPTER
MEETING MINUTES
JUNE 3, 1993

1. Past-President Barbara Dilts called the meeting to order at 7:30 p.m. Self-introductions followed.
2. The May minutes were approved.
3. Rick Paillon presented an overview of the highlights of this year's CRC.
4. Ben Sun conducted the drawing for the Research Promotion raffle, and the names of the lucky winners were announced.
5. Gail Brager distributed a Programs & Special Interests Survey, and discussed new ideas for next year for programs and the formation of technical committees, or "special interest groups."
6. Awards were presented to all of the committee chairs who served this past year.
7. Dick Charles gave a short presentation offering his thoughts on serving as ASHRAE Society's President this past year.
8. The meeting was adjourned at 9:30 p.m.

THE MARBLE DRAW

Next Month's Starting Pot: \$280.00+
Odds: 33%
Black Marbles Remaining: 2



HONOR ROLL

It has been decided to put more emphasis on the Honor Roll this year. Tom Reinarts has agreed to coordinate the effort and insure that there is an Honor Roll member firm every month. The Honor Roll will appear in a new location on the back page of the FOG DISPENSER. When the newsletter is folded for mailing, the addressee will appear on one side and the Honor Roll acknowledgment on the other side. This should give maximum exposure to those being honored. As in the past, we request the Honor Role firm to make a \$100 donation to the Golden Gate Chapter.

If you would like to be the Honor Roll firm for the month, please contact Tom Reinarts or Ellen Pierce at (415) 621-1199.

DUES NOTICES

The dues notices for this fiscal year of the Golden Gate Chapter were mailed on September 10, 1993. Send chapter dues directly to Mike Rubio. Dues should be paid by October 1, 1993. **Members who pay their dues later than November 10, 1993, will not be listed in the Golden Gate roster.**

The chapter bylaws require chapter members to be members in good standing of the Society at large. Please be sure that you have sent your Society dues to Atlanta when you pay your chapter dues. Those who do not pay their Society dues will become ineligible for chapter membership.

NOVEMBER PROGRAM
INDOOR AIR QUALITY,
A Healthy Building Design Protocol

DECEMBER PROGRAM
LOW TEMPERATURE AIR AND ENERGY SAVINGS,
Are They Compatible?

(Advanced Reservations Requested for December 2 Program)
The December 2, 1993, ASHRAE Meeting will feature a panel of four prominent engineers discussing one of our industry's hottest topics. Low temperature supply air systems are being applied to reduce construction costs and fan energy consumption for VAV fan systems. Still, in Northern California, many engineers have strong reservations about the application of this design solution.

Prior to the dinner meeting panel discussion, Dave Knebel with Thermal Storage Applications Research Center, University of Wisconsin-Madison and Gary Fields of Air Research, Inc., Palm Harbor, Florida will discuss low temperature air design applications. Due to limited seating space, please contact Gail Brager at 510-642-1696 if you plan to attend this pre-meeting design forum.

SCHOLARSHIPS AVAILABLE

There are two scholarships available this year. The Eric Thor Andresen Memorial Scholarship and the Golden Gate Chapter Scholarship. If you know anyone interested, please have them contact Debi May at (510) 732-3400. Send all donations for the scholarships to:

Debi May c/o Prime Air, Inc.
21363 Cabot Blvd.
Hayward, CA 94545

FOG DISPENSER

The *Fog Dispenser* will print MEMBER NEWS items, HVAC&R related SEEKING EMPLOYMENT, EMPLOYMENT OPPORTUNITY, and WORKSHOP ANNOUNCEMENT items free of charge on a space available basis. Full page (\$90), Half page (\$50) and Quarter Page (\$25) Announcements are also available. Please send information on these items to the *Fog Dispenser Editor* (see bottom of page 2 for address & phone)

ASHRAE GOLDEN GATE CHAPTER

DINNER RESERVATION FAX

For THURSDAY, OCTOBER 7, 1993

Please send Fax by noon on TUESDAY, October 5

FAX TO: Gail Brager - UC Berkeley

FAX: 510-643-5571

Phone: 510-642-1696

Please call if you have any last minute changes in plans.

Please cancel your reservation(s) if you cannot attend the meeting.

WHY NOT SHARE THIS FORM WITH YOUR FRIENDS & COLLEAGUES.

FROM: DICK CHARLES

COMPANY: CHARLES & BRAUN PHONE: 415-442-0110

Please make _____ reservation(s) for the following people (*fill in names below*):

DICK CHARLES _____

DAVID LINTOTT _____

LOCATION: Engineers' Club
160 Sansome St. 17th Floor
San Francisco, CA
(415) 421-3184

PARKING INFORMATION

The Engineer's Club is between California & Pine streets. Parking is available on the street after 6:00 p.m. The following parking garages are also open 24 hours:

1. Embarcadero One, between Sacramento & Clay, enter on Battery. After 5:00 p.m.: \$1/hr, or free if validated (try one of the snack food shops)!
2. Mandarin Hotel, in California Center between California & Pine, enter on Battery. After 6:00 p.m.: \$6.00 flat fee.
3. Bank of America, at Montgomery St., enter on Pine or California, After 5 p.m.: \$7.00 flat fee.

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Manufacturer of Precision Airflow Controls

Bill Schultz, Western Regional Sales Manager
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Phone: (510) 596-1788 FAX: (510) 596-1789

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Norman Wright Mechanical Equipment Corporation

Airflow Controls

NOVEMBER PROGRAM: INDOOR AIR QUALITY A HEALTHY BUILDING DESIGN PROTOCOL

NOTE: This month's meeting is at the PG&E PEC, and dinner reservations must be sent by Monday not Tuesday.

SEE PAGE 1 FOR DETAILS



Golden Gate Chapter
ASHRAE
370 Brannan Street
San Francisco, CA 94107

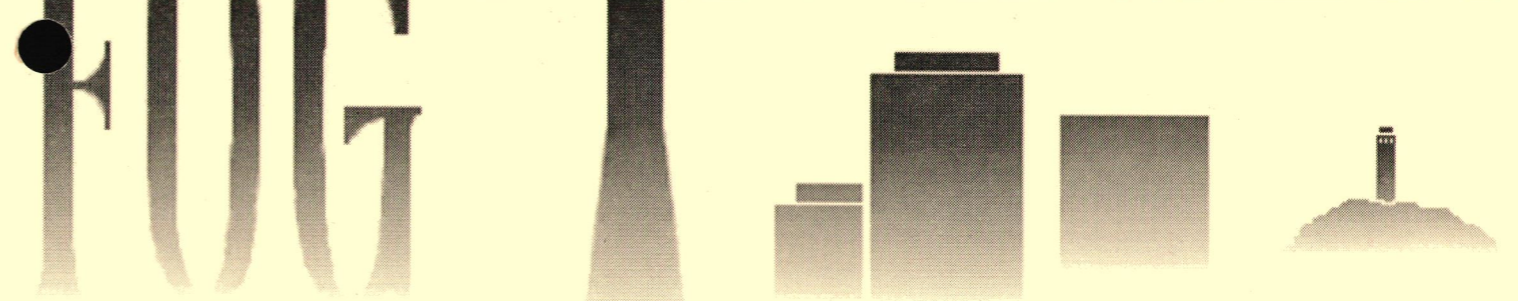


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OCT 28 1993

CHARLES & BRAUN

Richard A. Charles
Charles & Braun
150 Spear Street
San Francisco, CA 94105

FOG DISPENSER



Golden Gate Chapter  ASHRAE

VOLUME XXXIII • NUMBER 2

NOVEMBER 1993

MEETING NOTICE

DATE: Thursday, November 4, 1993
SOCIAL HOUR: 5:30 p.m.
DINNER: 6:30 p.m.
LOCATION: PG&E Pacific Energy Center
851 Howard Street
San Francisco, CA
(415) 973-7268
COST: \$25.00
TO RESERVE: Please phone or fax your dinner reservation to Gail Brager by Monday prior to the meeting. A fax form is enclosed for your convenience.
PHONE: (510) 642-1696
FAX: (510) 643-5571

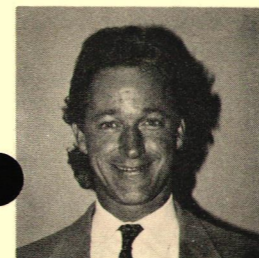
PLEASE NOTE:

This month's meeting is at the PG&E PEC not the Engineer's Club.

Dinner reservations must be sent by MONDAY not Tuesday.

This month's meeting is STUDENT NIGHT. Please share this information with any students who might be interested. See the President's Message on page 2 for cost \ benefit information for student members.

SPEAKER: Francis (Bud) J. Offermann III, P.E., C.I.H.,
Indoor Environmental Engineering



Bud Offermann is president of Indoor Environmental Engineering. He directs a team of engineers, hygienists and architects specializing in healthy building design.

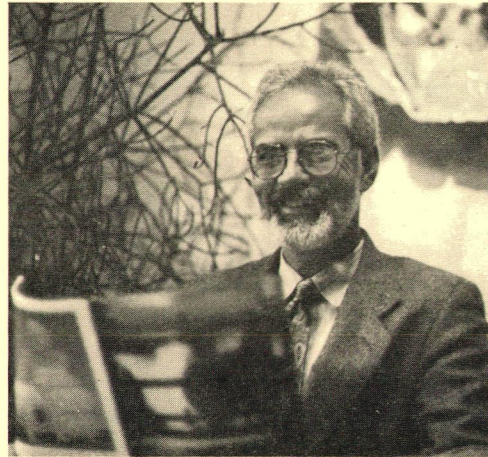
NOVEMBER PROGRAM

PROGRAM: Indoor Air Quality (IAQ)
A Healthy Building Design Protocol

What is a Healthy Building? One definition is that a healthy building is one where people are comfortable and there is no increased risk to disease. Some say increased attention to worker productivity in office buildings will double the \$/Ft² spent on HVAC systems. **Believe it or not, it has been reported that more money is typically spent on carpeting than on HVAC first cost in office buildings.** Perhaps the building industry can afford the added first cost associated with HVAC systems designed for improved IAQ.

Incorporating special IAQ considerations into the design of new office buildings is an exciting new area of building sciences and an important new market area for members of ASHRAE. This presentation will describe the IAQ design protocol used for the new 350,000 square foot State of Washington Ecology Building. Pre-construction, pre-occupancy and post-occupancy design considerations will be reviewed. The discussion will include design approach, contamination emission specifications, construction scheduling, flush out mitigation strategies and the projected indoor concentrations for the new building. Increased construction costs, and benefits derived from increased worker productivity will be analyzed for HVAC systems designed for improved IAQ.

This talk will emphasize your role, as an engineer in the HVAC industry, in the process of creating a healthy indoor environment.



PRESIDENT'S MESSAGE

Our first meeting this season was a great success. It was membership night and there were several guests who requested membership applications. The program on Building Commissioning was well received as evidenced by the responses that Gail Brager, program chair, received in the program survey.

In an effort to solicit more members, we mailed out a Fog Dispenser with an invitation to join the chapter to all those Society members who were not Chapter members last year. Mike Rubio received mailing labels from Society to accomplish this. Unfortunately the labels arrived on large sheets and were not in alphabetical order. Mike and his staff made a heroic effort to sort out the chapter members from

these labels but was not 100 percent successful. As a consequence, several chapter members inadvertently received two newsletters last month. We hope if you received a second news letter that you took the opportunity to pass the extra copy along to a potential member.

We are removing names of non-society or non-chapter members from the *Fog Dispenser* mailing list. We wish to supplement the new mailing list with names of interested parties, such as editors of other professional societies. If you know of someone who should go on the list, please contact Mike Rubio.

The November meeting is **Student Night**. In an effort to gain more student members we are continuing our practice of sponsoring all student dinners, so please contact Gail Brager if you wish to sponsor a student. As a student member for \$42 (the combined society and chapter dues) a student receives a handbook worth \$114, a year's subscription to the ASHRAE Journal and the Fog Dispenser, and all the information and professional contacts available at our meetings. If the student can't afford the handbook, he or she receives all the rest for only \$18. We hope you spread the word of this remarkable offer to all the engineering students and professors that you come in contact with.

Elsewhere in this issue you will find details of our student scholarships and travel grant that we hope you will also help publicize. We can also use your help in increasing meeting attendance. I am encouraging all of you reading this to immediately call just one other member or potential guest and tell that person about the November meeting. It's going to be a memorable one.

Richard Paillon

ASHRAE GOLDEN GATE CHAPTER 1993-1994 COMMITTEES AND CHAIRPERSONS

Attendance..... Richard Charles	Awards..... Jack Kniveton	Auditing..... Hank Mouw
BAEC..... Tom Reinarts	Code..... Bob Voelz	CRC Action..... Gail Brager
Education..... Mark Hydeman	Energy & Tech..... Peter Turnbull	Fog Dispenser..... Richard Nagy
Golf..... Mark Luckes	Government Affairs..... Jon Wintermeyer	Historian..... Bob Phillips
Honor Roll..... Tom Reinarts	Marble Game..... Tim Provo	Membership..... Michael Rubio
Product Show..... Brad Gustafson	Program..... Gail Brager	Publicity..... Sal Giglio
Reception..... Steve Doberstein	Refrigeration..... Jim Davis	Research..... Marie Madden
Roster..... Jim Taylor/Tim Provo	Scholarship..... Debi May	Seminar..... Richard Gistelli
Tennis..... Rich Leao		

DO YOU KNOW A PROSPECTIVE NEW MEMBER?

Contact *Membership Chair*:
Michael Rubio (415) 777-5333
(415) 641-4413 FAX

MAIL, FAX or PHONE NEWS TO:
FOG DISPENSER
Rick Nagy, *Editor*
Murakami & Myers Engineers
750 Davis Street
Santa Rosa, CA 95401
Telephone (707) 546-1332
FAX (707) 546-5733

FOG DISPENSER DEADLINES

Meeting Dates	Copy Deadlines
November 4, 1993 -----	October 15, 1993
December 2, 1993 -----	November 12, 1993
January 6, 1993 -----	December 17, 1993
February 3, 1993 -----	January 14, 1994
March 3, 1994 -----	February 11, 1994
April 7, 1994 -----	March 18, 1994
May 5, 1994 -----	April 15, 1994
June 2, 1994 -----	May 13, 1994

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1993--1994 OFFICERS

Richard Paillon President
Gail Brager President-Elect
Roy Gifford Secretary
Dennis Thompson Treasurer

Board of Governors

Richard Leao Ernie French
Dan Reiter

\$\$ MONEY FOR STUDENTS \$\$

The Golden Gate Chapter offers several forms of support for students:

Dec. 1 Deadline:

Travel Grant, \$500 (to support travel to an ASHRAE Society meeting)

Feb. 15 Deadline:

Golden Gate Scholarship \$1,000
Eric Thor Andresen Memorial Scholarship \$750

For information and applications, contact:
Debi May 510-732-3400 c/o Prime Air, Inc.
21363 Cabot Blvd., Hayward, CA 94545
or: Gail Brager 510-642-1696, Dept. of Architecture,
Univ. of California, Berkeley, CA 94720

SCHOLARSHIP DONATIONS NEEDED

Donations for any amount will be greatly appreciated. The Chapter will be disbursing two scholarships to local students. If you can make a donation to either the Golden Gate Chapter Scholarship or the Eric Thor Andresen Memorial Scholarship, please send it to: Debi May - Scholarship Chair
c/o Prime Air, Inc.

21363 Cabot Blvd.
Hayward, CA 94545

All donations are tax deductible and you will receive a receipt for your donation. Thanks for the support.

ASHRAE video Tells Status of Ozone Depletion

In the video entitled "Scientific Basis for Ozone Depletion", Dr. Sherwood Rowland, the co-originator of the theory of ozone depletion, describes how the implementation of the Montreal Protocol has resulted in a falling off in the rate of increase of concentrations of refrigerants in the lower atmosphere. Dr. Rowland addresses a range of issues -- from how the ozone depletion theory evolved to predictions for future losses of stratospheric ozone. To order this video (1.5 hour length VHS or PAL), send \$52 (ASHRAE member, \$35) to Publications Sales, ASHRAE, 1791 Tullie Circle, N.E., Atlanta, GA 30329. Or call 404-636-8400, fax 404-321-5478.

FOG DISPENSER

The *Fog Dispenser* will print MEMBER NEWS items, HVAC&R related SEEKING EMPLOYMENT, EMPLOYMENT OPPORTUNITY, and WORKSHOP ANNOUNCEMENT items free of charge on a space available basis. Full page (\$90), Half page (\$50) and Quarter Page (\$25) Announcements are also available. Please send information on these items to the *Fog Dispenser Editor* (see bottom of page 2 for address & phone)

EMPLOYMENT OPPORTUNITIES

MECHANICAL PROJECT MANAGER/SENIOR ENGINEER

South Bay Mechanical Engineering Firm seeks Senior level engineer with a minimum of 2 years experience as a mechanical project manager taking full responsibility for the design and customer liaison required to complete projects. Qualified person must have a minimum of 7 years of experience in the design of various HVAC systems for clean rooms, biotech, and/or medical applications, along with standard commercial buildings. Experience with process piping and plumbing design would be an advantage. We offer an excellent salary and benefits package. Send resume to: Mechanical Planing, Inc., 871 Coleman Ave., #200, San Jose, CA 95110.

MECHANICAL ENGINEER P.E.

Fast growing East Bay Mechanical Engineering Firm seeks Mechanical Engineer, P.E. with minimum 8 years experience in HVAC, Plumbing, and Fire Protection to head Mechanical Engineering Department. Excellent benefits package and growth opportunity. Send resume to: ATI Engineering Services, Inc., 2010 Crow Canyon Place, Suite 140, San Ramon, CA 94583

ENERGY CONSERVATION

Energy Investment, Inc., a prestigious national firm specializing in energy management is expanding its leading role as a full-service firm that offers planning, implementation, engineering, and project management to utilities and large facility owners. As we build our California and Western States Regional Office, we have openings for a **Project Manager** and a **Senior Project Engineer**. These positions require a BSME or BSEE, (or comparable technical education or experience), strong technical, analytical, writing and verbal skills and related experience in building energy consulting/engineering analysis, design and construction. The Project Manager should also have strong project management skills in utility DSM programs. Send resume with salary history to MAT, Dept. ASH.SF, Energy Investment, Inc., One Winthrop Sq., Boston, MA 02110.

NEW CHAPTER MEMBERS

The Golden Gate ASHRAE Chapter welcomes the following new members:

- Gordon Kaung Eley Associates
- Jerry Cheng Central Mechanical Co.
- Jack Montanaro Johnson Controls
- Katherine Leavy Charles M. Salter Assoc.
- Allen Wicks Abatement Inspections, Inc.

ASHRAE GOLDEN GATE CHAPTER

DINNER RESERVATION FAX

For THURSDAY, NOVEMBER 4, 1993

Please send Fax by **NOON** on **MONDAY, NOVEMBER 1**

FAX TO: Gail Brager - UC Berkeley

FAX: 510-643-5571 Phone: 510-642-1696

Please call if you have any last minute changes in plans.

Please cancel your reservation(s) if you cannot attend the meeting.

FROM: DICK CHARLES

COMPANY: C & B ENGINEERS

PHONE: 415 442-0110

Please make _____ reservation(s) for the following people (*fill in names below*):

DICK CHARLES

PAUL O'NEIL

LOCATION: PG&E Pacific Energy Center
851 Howard Street, San Francisco, CA
(415) 973-7268

STUDENT SPONSORSHIP

*Remember - November meeting is student night
Please show your support!*

YES, I would like to provide students with the opportunity to attend our meetings.

I would like to support students for the current meeting.

I am willing to sponsor _____ student(s) at \$25 each, if any are interested in attending.

I would like to make a long-term commitment.

I am willing to sponsor _____ student(s) to attend ASHRAE meetings at \$25 each, up to _____ per meeting, and/or a total of _____ per year.

Signature: _____

Company: _____

Phone: _____

PLEASE MAKE CHECKS PAYABLE TO "ASHRAE"

PLEASE TAKE NOTE: This month's meeting is at the PEC not the Engineer's Club.
Dinner reservations must be sent by MONDAY not Tuesday.

ASHRAE GOLDEN GATE CHAPTER
MEETING MINUTES
OCTOBER 7, 1993

1. President Rick Paillon called the meeting to order at 7:15 p.m. Self-introductions followed
2. The June minutes were approved.
3. John Saverhagen invited the Golden Gate Chapter to May CRC.
4. President Paillon indicated that his goals for the chapter are to increase membership, improve meeting attendance and obtain greater chapter recognition.
5. President Paillon called for help for the committees. Members may contact any of the Board members for information.
6. Richard Jackson-Gistelli announced that the format for the seminar will change. It will be held the last Thursday in March and the final three Thursdays in April. Those with question or suggestions may reach Richard at (510) 294-3458.
7. Timothy Provo indicated that production of the Roster requires that Dues be paid right away. Informational Data will be accepted and placed in the Roster, but this also must be submitted soon.
8. Michael Rubio indicated that Dues notices are out and encouraged everyone to pay their National and Chapter Dues.
9. Gail Brager indicated that those who wish to participate in the Honor Roll will have their Informational Data placed in the publication such that it will be visible when folded for mailing, for greater exposure. Those wishing to participate should contact Thomas Reinarts at (415) 621-1199.
10. President Paillon announced that two members, Walton Hobart and Noris Nelson have been members of ASHRAE for 50 years.
11. Richard Greco asked for any information on codes governing Hydrogen generation ventilation. He can be reached at (415) 346-2721.
12. Jim Davis indicated that the UC extension Program could use some program expertise help. (415) 493-7100.
13. Meeting was adjourned at 9:25 p.m.

THE MARBLE DRAW

Next Month's Starting Pot: \$375.00+
Odds: 50%
Black Marbles Remaining: 1



ASHRAE- GOLDEN GATE CHAPTER 1993-94
PROGRAM SCHEDULE

DATE	THEME	PROGRAM
Nov. 4	Student Night Location: PEC	Indoor Air Quality
Dec. 2	Membership	Cold Air Distribution *Panel Discussion *Technical Seminar
Jan. 6	Research	PG&E's ACT ² Project
Feb. 3	Joint Mtg. w/AIA	The Design/Build Process *Panel Discussion
Mar. 3	Membership	Designing to Avoid Litigation
Apr. 7	Local Student Night /Scholarship Location: PEC	Design for Energy Efficiency *Technical Seminar
May 5	Field Trip	Sparks Arena, San Jose
June 2	Spouse Night	Awards Night

NOTE: December's Program Theme is *Membership*. Mark your calendars now and ask a friend or colleague to join you at December's Meeting.

DECEMBER PROGRAM

LOW TEMPERATURE AIR AND ENERGY SAVINGS,
(Advanced Reservations Requested for December 2 Program)
The December 2, 1993, ASHRAE Meeting will feature a panel of four prominent engineers discussing one of our industry's hottest topics. Low temperature supply air systems are being applied to reduce construction costs and fan energy consumption for VAV fan systems. Still, in Northern California, many engineers have strong reservations about the application of this design solution.
Prior to the dinner meeting panel discussion, Dave Knebel with Thermal Storage Applications Research Center, University of Wisconsin-Madison and Gary Fields of Air Research, Inc., Palm Harbor, Florida will discuss low temperature air design applications. Due to limited seating space, please contact Gail Brager at 510-642-1696 if you plan to attend this pre-meeting design forum.

DECEMBER HONOR ROLL

CORNELY COMPANY

1277 Howard St., San Francisco, CA 94103

Phone: (415) 252-1800 * FAX: (415) 252-1813

Providing the engineering community with sales, installation and servicing of Lo Nox Burners, Boiler Flame Safeguards, Combustion Controls and Energy Management Systems for Reduced Gas Usage and Compliance with Bay Area Air Quality Management District Regulations.

WISHING YOU ALL A WARM HOLIDAY SEASON, BUT IF IT ISN'T, CALL —

Ed Greenwood * John Kraft * John Randle

R6
DECEMBER PROGRAM: LOW TEMPERATURE AIR AND ENERGY SAVINGS: ARE THEY COMPATIBLE?
A PANEL DISCUSSION
SEE PAGE 1 FOR DETAILS



Golden Gate Chapter
ASHRAE
370 Brannan Street
San Francisco, CA 94107



Richard A. Charles
C & B Consulting Engineers
150 Spear Street #500
San Francisco, CA 94105

FOG DISPENSER

Golden Gate Chapter



ASHRAE

VOLUME XXXIII • NUMBER 3

DECEMBER 1993

MEETING NOTICE

DATE: Thursday, December 2, 1993
SOCIAL HOUR: 5:30 p.m.
DINNER: 6:30 p.m.
LOCATION: Engineers' Club
160 Sansome St. 17th Floor
San Francisco, CA
(415) 421-3184
COST: \$25.00
TO RESERVE: Please phone or fax your dinner reservation to Gail Brager by **Tuesday** prior to the meeting. A fax form is enclosed for your convenience.
PHONE: (510) 642-1696
FAX: (510) 643-5571

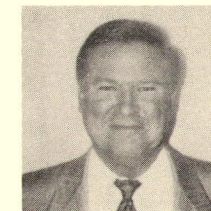
SEE FAX FORM FOR PARKING INFORMATION

DECEMBER PROGRAM

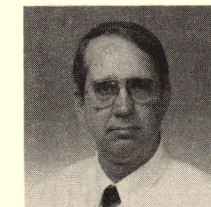
PROGRAM: **Low Temperature Air and Energy Savings: Are They Compatible?**
A Panel Discussion

Our four speakers will address the following issues often raised with regard to systems using 40 to 45°F supply air temperatures. 1) What about the loss of "free cooling" provided by air side economizers using 55°F VAV supply air temperatures? 2) What is better: fan power terminals and conventional diffusers, or induction diffusers with pinch down boxes? 3) How can we comply with ASHRAE Ventilation Standard 62-89 and guarantee building IAQ for VAV systems? 4) What about stagnant room conditions with lower supply air quantities? 5) How do we prevent "sweating" on duct work and diffusers in more humid areas of the building?

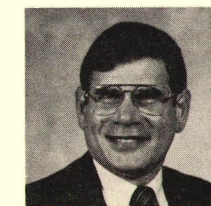
PRE-MEETING TECHNICAL SEMINAR
5:00 P.M. AT THE ENGINEERS' CLUB
LOW TEMPERATURE AIR DESIGN TECHNIQUES
SPEAKERS: DAVE KNEBEL and GARY FIELDS
SEE PAGE 3 FOR DETAILS



Gary Fields - Air Research Inc., Palm Harbor, Florida: Gary has been in the HVAC industry for 30 years. He is the joint holder of early patents on induction diffusers for 40°F supply air systems and has written several ASHRAE papers and articles on low temperature air topics. He is President of Air Research, Inc., a manufacturer of cold air distribution products and cold air refrigeration systems.



Dan Int-Hout - Carrier Corp., Syracuse, NY: Dan is Systems Products Manager for Carrier Corp. Commercial Applied Systems. He has written several papers on VAV systems. His most current ASHRAE Journal article entitled "Low Temperature Air, Thermal Comfort and Indoor Air Quality" appeared in the May 1992 issue. Dan received the ASHRAE Distinguished Service Award in 1993.



Dave Knebel - Univ. of Wisconsin-Madison: Dave is an Associate Professor and Director of Research for the Thermal Storage Applications Research Center at the University of Wisconsin-Madison College of Engineering. He is principal lecturer for ASHRAE's Professional Development Seminar in Energy Calculations and is Chairman of ASHRAE TC 4.7 Energy Calculations as well as an active member of TC 6.9, Thermal Storage.



Benjamin Sun - Flack & Kurtz, SF, CA: Ben is an Associate with Flack & Kurtz Consulting Engineers. He is a member of ASHRAE TC 6.9 Thermal Storage and the International Thermal Energy Storage Advisory Council (ITESAC). Ben was project engineer for the 600 California Street Building in San Francisco, which is a 20 story, high rise using a 3000 ton-hour thermal storage and low temperature supply air design.



PRESIDENT'S MESSAGE

November's meeting was very well attended and for good reason. The program on indoor air quality introduced a new method on how to quantitatively design for a healthy environment and was very thought provoking. Last month's was the first meeting in several years where we had to turn away people who hadn't made reservations. They went to the Chevy's across the street and returned for the program.

The way I schedule the ASHRAE meetings is to put them all on my calendar at the beginning of the year and not wait for the Fog Dispenser announcements. I would encourage all of you to pencil them in now even if you are not sure you will be able to attend. I can assure you that the programs we have in store will be worth your time. If you do wish to come to a

meeting without a reservation, by all means take your chances. We have usually been able to squeeze in late comers. There is always the possibility of dining elsewhere and attending only the program, but please try to send in your reservations before the deadline.

You will want to pencil the spring seminar on your calendars for the evening of March 31, April 14, 21 and 28 with a general meeting on April 7. This "new" format of several meetings is actually one that has been used with great success many years ago. The topic has not been finalized but will probably deal with the energy implications of the different types of air conditioning systems.

We are removing names of non-society, non-chapter members from our Fog Dispenser mailing list. If you wish to continue getting this newsletter, send in your dues to Mike Rubio.

ASHRAE functions successfully because of its volunteers. Now is the time for interested persons to get involved in ASHRAE by serving on one of its many committees. The chapter committee chairs are listed in this newsletter. Please find a committee that would interest you and give the chair a call. You will be rewarded.

We still need your help in increasing meeting attendance. Please call just one other member or potential guest and tell that person about the December meeting. The topic is very important to all those trying to stay abreast in the field.

Richard Paillon

ASHRAE GOLDEN GATE CHAPTER 1993-1994 COMMITTEES AND CHAIRPERSONS

Attendance.....Richard Charles	AwardsJack Kniveton	Auditing.....Hank Mouw
AEC.....Tom Reinarts	CodeBob Voelz	CRC Action.....Gail Brager
EducationMark Hydeman	Energy & Tech.....Peter Turnbull	Fog Dispenser.....Richard Nagy
GolfMark Luckes	Government AffairsJon Wintermeyer	Historian.....Bob Phillips
Honor RollTom Reinarts	Marble GameTim Provo	Membership.....Michael Rubio
Product Show.....Brad Gustafson	Program.....Gail Brager	PublicitySal Giglio
Reception.....Steve Doberstein	RefrigerationJim Davis	ResearchMarie Madden
RosterJim Taylor/Tim Provo	Scholarship.....Debi May	SeminarRichard Gistelli
Tennis.....Rich Leao		

DO YOU KNOW A PROSPECTIVE NEW MEMBER?

Contact *Membership Chair*:
Michael Rubio (415) 777-5333
(415) 641-4413 FAX

MAIL, FAX or PHONE NEWS TO: FOG DISPENSER

Rick Nagy, *Editor*
Murakami & Myers Engineers
750 Davis Street
Santa Rosa, CA 95401
Telephone (707) 546-1332
FAX (707) 546-5733

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1993-1994 OFFICERS

Richard Paillon	President
Gail Brager	President-Elect
Roy Gifford	Secretary
Dennis Thompson	Treasurer
Board of Governors		
Richard Leao	Ernie French
		Dan Reiter

SCHOLARSHIP DONATIONS NEEDED

Donations for any amount will be greatly appreciated. The Chapter will be disbursing two scholarships to local students. If you can make a donation to either the Golden Gate Chapter Scholarship or the Eric Thor Andresen Memorial Scholarship, please send it to: Debi May - Scholarship Chair
c/o Prime Air, Inc.
21363 Cabot Blvd.
Hayward, CA 94545

All donations are tax deductible and you will receive a receipt for your donation. Thanks for the support.

SOLAR PROCESS HEAT TECHNOLOGY WORKSHOP

A workshop on Solar Thermal Energy Systems for Application in Industry, Commerce and Government is being sponsored by the U.S. Department of Energy. Some of the topics that will be covered are: Examples of successfully operating solar systems; Use of third-party investment or shared energy savings; Commercially available solar systems; Assistance services available through DOE; and others.

The two day workshop, which is Free-of-Charge, will take place on January 12-13, 1994, at the Sacramento Red Lion Hotel, 2001 Point West Way, Sacramento, CA 95815, 916-929-8855. For additional information contact: Julia Oliver 510-637-1952.

\$\$ MONEY FOR STUDENTS \$\$

The Golden Gate Chapter offers several forms of support for students:

Dec. 1 Deadline:

Travel Grant, \$500 (to support travel to an ASHRAE Society meeting)

Feb. 15 Deadline:

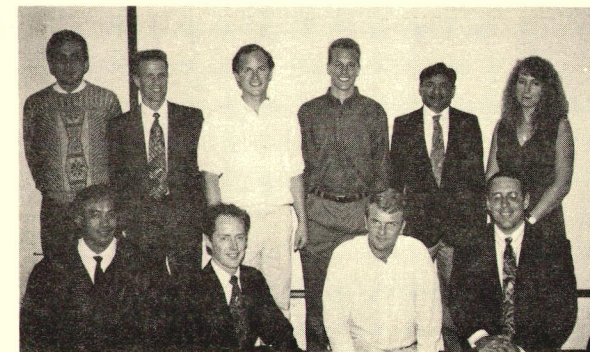
Golden Gate Scholarship \$1,000
Eric Thor Andresen Memorial Scholarship \$750

For information and applications, contact:

Debi May 510-732-3400 c/o Prime Air, Inc.
21363 Cabot Blvd., Hayward, CA 94545
or: Gail Brager 510-642-1696, Dept. of Architecture,
Univ. of California, Berkeley, CA 94720

EMPLOYMENT OPPORTUNITIES

BSME, PE with commercial projects background, for a temp to permanent position in the Tri-Valley area. Salary is DOE.
Contact: Julie Collins, DSI 51-603-0600



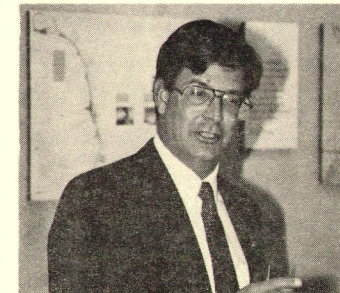
Student Night was a big success!

Front row (left to right)

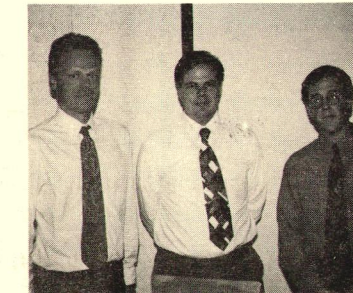
- Leo Tonel Cal Poly
- Mark Hydeman PEC
- Marc E. Fountain UC Berkeley
- Dan Donahoe Cal Poly

Back row (left to right)

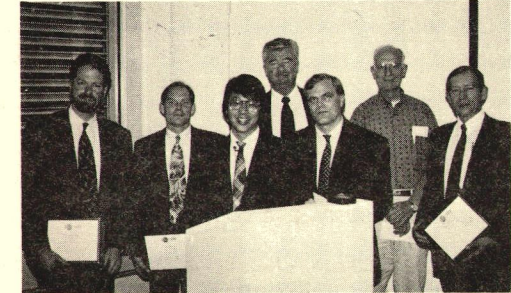
- Jorge Zavala Cal Poly
- Jim Van DeVanter Cal Poly
- Russ Brown Cal Poly
- Kevin Carter Cal Poly
- Kris Patel Professor, Cal Poly
- Shannon Fleshman Cal Poly



Regional TEGA Chairman Dean Borges



New Members, Chris Case Jim Brugger & Len Bertolami



Ben Sun presents Research Promotion Drive Awards to 1992-1993 top contributors

ASHRAE GOLDEN GATE CHAPTER

DINNER RESERVATION FAX

For THURSDAY, DECEMBER 2, 1993

Please send Fax by noon on TUESDAY, November 30

FAX TO: Gail Brager - UC Berkeley

FAX: 510-643-5571

Phone: 510-642-1696

Please call if you have any last minute changes in plans.

Please cancel your reservation(s) if you cannot attend the meeting.

WHY NOT SHARE THIS FORM WITH YOUR FRIENDS & COLLEAGUES.

FROM: DICK CHARLES

COMPANY: C & B ENGINEERS

PHONE: 415 442-0110

Please make _____ reservation(s) for the following people (fill in names below):

Please check box for each person attending the Pre-Meeting Seminar.

DICK CHARLES

•Attending Pre-Meeting Seminar?

PAUL O'NEIL

•Attending Pre-Meeting Seminar?

JOHN LEVENTHAGEN

•Attending Pre-Meeting Seminar?

•Attending Pre-Meeting Seminar?

•Attending Pre-Meeting Seminar?

LOCATION: Engineers' Club
160 Sansome St. 17th Floor
San Francisco, CA
(415) 421-3184

PARKING INFORMATION

The Engineer's Club is between California & Pine streets. Parking is available on the street after 6:00 p.m. The following parking garages are also open 24 hours:

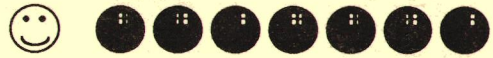
1. Embarcadero One, between Sacramento & Clay, enter on Battery. After 5:00 p.m.: \$1/hr, or free if validated (try one of the snack food shops)!
2. Mandarin Hotel, in California Center between California & Pine, enter on Battery. After 6:00 p.m.: \$6.00 flat fee.
3. Bank of America, at Montgomery St., enter on Pine or California, After 5 p.m.: \$7.00 flat fee.

**ASHRAE GOLDEN GATE CHAPTER
MEETING MINUTES
NOVEMBER 4, 1993**

1. President Rick Paillon called the meeting to order at 7:20 p.m.
2. Richard Jackson-Gistelli announced the Spring Seminar will be held March 31, April 14, 21 and 28, 1993. He introduced committee members and asked anyone with subject suggestions to contact him at (510) 294-3458.
3. Mike Scofield, on behalf of Mile Rubio, asked that all new member and students attending the dinner meeting be photographed during the break.
4. Ben Sun presented awards to those who contributed to the ASHRAE Research Program and mentioned that PG&E had contributed \$10,000 again this last year.
5. Tom Reinarts asked that anyone wishing to be recognized through the Honor Roll for the Fog Dispenser to give him a business card.
6. Tim Provo announced that everyone has about one week to get their dues paid in order to be included in the Roster. He also asked that those who may wish to be recognized in the Roster should contact him for information.
7. Dean Borgis, Regional TEGA Chair, encouraged attendance at the San Diego CRC. He also encouraged the Chapter to nominate people for Regional Posts. He will also entertain any suggestions for new technical projects.
8. Bob Voelz announced that the San Francisco Code will include required sprinkler retrofits for high rises in its next code issue.
9. John Wintermeyer discussed letters being sent to local building officials offering the help of Chapter members' expertise.
10. Gail Brager thanked those who had sponsored attending students' dinners.
11. Dick Charles knows someone who wishes to donate ASHRAE handbooks from 1968 to present should anyone have the need for same.
12. The marble draw was won by Charlie Nadig. Marie Madden please note: You should approach Charlie for a Research donation!
13. Bud Offerman spoke to us about indoor air quality.
14. The meeting was adjourned at 9:30 p.m.

THE MARBLE DRAW

Next Month's Starting Pot: \$50.00+
Odds: 12.5%
Black Marbles Remaining: 7



**PRE-MEETING TECHNICAL SEMINAR
5:00 P.M. AT THE ENGINEERS' CLUB
LOW TEMPERATURE AIR DESIGN TECHNIQUES
SPEAKERS: DAVE KNEBEL and GARY FIELDS**

The pre-dinner technical seminar will cover many more of the nuts-and-bolts design issues than our panel discussion will allow. Analysis of design strategies will include a review of liquid overfeed direct refrigeration vs. ice storage systems to develop 40°F supply air. A comparison of fan powered low temperature air terminals with conventional diffusers vs. pinch down boxes and low temperature (direct injection) induction diffusers will be developed. Each system will be evaluated on first costs, energy costs, space and maintenance requirements, sound levels and IAQ results. Please mark the box on the Dinner Reservation Fax sheet for the PRE-DINNER SEMINAR if you plan on attending.

NEW CHAPTER MEMBERS

The Golden Gate ASHRAE Chapter welcomes the following new members:

- Leonard Bertolami Air Conditioning Company, Inc.
- Jeff Blaevoet Flack + Kurtz Consulting Engineers
- James Brugger Keller & Gannon
- Bill Call..... Linford Company
- J. Christopher Case..... Keller & Gannon
- Pat Dillmann I. A. Naman & Associates
- John McDonald Glumac & Associates
- Cho Ng..... C and N Engineers
- Janti Sommer S.F. Dept. of Public Works
- John Stultz Glumac & Associates

JANUARY PROGRAM

The days fly by quickly following the New Year and the mail tends to pile up, so please mark your calendar now:

Thursday, Jan, 6

Program: PG&E's ACT² Energy Efficiency Retrofit Project
 Speaker: Grant Brohard, PG&E

Tuesday, Jan, 4

Reservations are due to Gail Brager.
 Phone: 510-642-1696, Fax: 510-643-5571