

NEWS FROM HEADQUARTERS

STANDARD 93-77 REISSUED

In 1977, ASHRAE published Standard 93-77 "Methods of Testing to Determine the Thermal Performance of Solar Collectors" (ANSI B198.1-1977).

Now, Standard 93 has been reissued due to an unusually large number of editorial mistakes in the original publication.

New orders are also being accepted. The price to ASHRAE members is \$4.00; \$8.00 to nonmembers. Prepayment must be included and add postage and handling charges: \$.35 per standard U.S.; \$.65 outside U.S.

RESEARCH PROMOTION: WHAT A YEAR!

The final count on the 1977-78 Research Promotion Fund Drive is \$475,000. That's what chapters collected against an optimistic goal of \$433,000. Compared to last year's total of \$354,000, its a very impressive record. Most chapters launched aggressive campaigns this time, and the result was a 34% increase in funds. The insert to this newsletter lists contributions chapter-by-chapter for the past five years.

ECP WILL HELP STUDENTS & EDUCATORS

Environmental Control Principles has been used as an educational tool by instructors, students, engineers and anyone interested in the basic theory of heating and cooling technology since publication of the first edition in 1975. Now a revised second edition designed to supplement the 1977 Fundamentals volume of the ASHRAE Handbook series is available from ASHRAE.

Prepared by Professors Ronald H. Howell and Harry J. Sauer, Jr.,

.... continued....

of the University of Missouri, Rolla, for ASHRAE, Environmental Control Principles helps explain the essentials of equipment, system design, and application found in the Fundamentals volume.

Members of ASHRAE may purchase Environmental Control Principles for \$10.00; Nonmembers for \$20.00. Prepayment plus \$1 U.S. and \$2 outside U.S. postage is required.

1978 Membership Roster

An alphabetical and geographical listing of ASHRAE members for sale to members only. Complimentary copies have been or are being sent to members of the BOD, chairmen of general committees, and 1978-79 chapter presidents whose names are on file at Headquarters.

ASHRAE members \$12.00
Add postage/handling: \$1 US;
\$2 outside US

TEMPERATURE DATA BOOKS

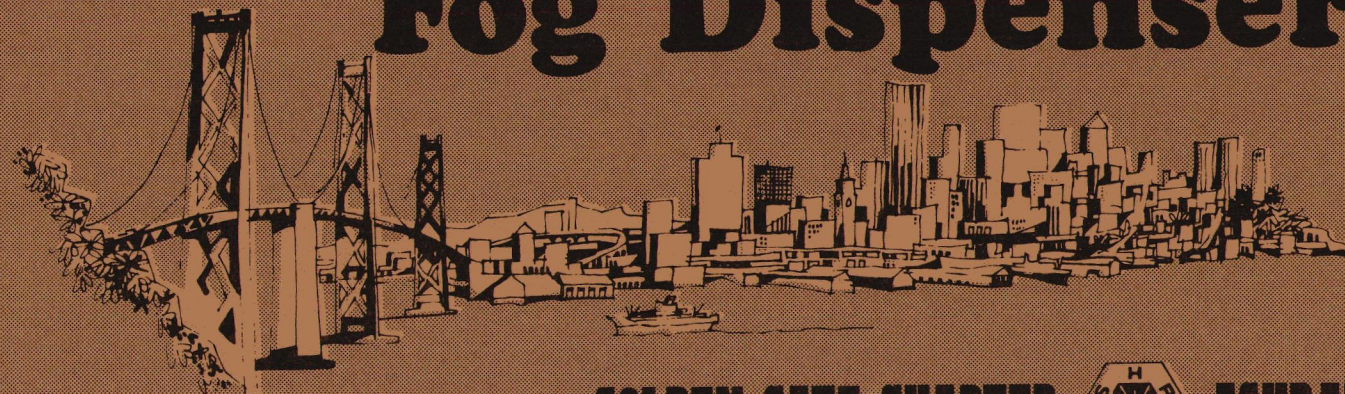
Since the 1965 Edition of "Recommended Outdoor Design Temperatures, Northern California" was completely out of print, the Board of Governors ordered 1500 copies of the 1977 edition of the booklet to be reprinted at (3)-500 copies increments.

The only change in the booklet is in the Preface which added the statement on the requirements of the State Energy Conservation Regulation Title 24, when selecting the outdoor design temperatures.

To obtain this booklet, send \$3.00 per copy which includes postage and handling to:

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

Fog Dispenser



GOLDEN GATE CHAPTER ASHRAE

VOLUME XVIII NO. 3

DECEMBER, 1978

MEETING NOTICE

The third meeting of the Golden Gate Chapter for the 1978-79 year will be held at the Engineer's Club on the 16th floor of the Hong Kong Bank Building, 160 Sansome Street, San Francisco, on Thursday, December 7, 1978. The Social Hour will begin at 5:30 P.M., with dinner at 6:30 P.M.

DECEMBER PROGRAM

Chairman: Tom Gilbertson

Subject: "The Correct Way to Handle Steam" - Your Ashrae guide contains technical misunderstandings regarding steam and piping that could be potentially dangerous

Speaker: Jim Meeker -
William Loomis Co.

Mr. Meeker is a graduate of the California Maritime Academy, he holds an unlimited steam and diesel license from the U.S. Coast Guard.

PRE-MEETING WORKSHOP

Chairman: Sherman Brown 6:00 -
6:30 PM
Upstairs

Topic: Construction and Development - Future trends in San Francisco

Speaker: Stephan Weiker -
President, Business
Expansion Services

Now an independent business consultant, Mr. Weiker was formerly Manager of the research analysis department of the San Francisco Chamber of Commerce, as well as two term president of the San Francisco Junior Chamber of Commerce.

* NOTICE * NOTICE * NOTICE *

There will be a raffle of the returned reservation cards! The one picked will receive a free dinner for the January meeting. Send in your reservation cards early.

HONOR ROLL
JOHNSON CONTROLS, INC.

Automatic Temperature Controls and Building Automation Systems

Greg Braak, Steve Isaacson, Craig Corson, Jack Zarour

New Location
50 Park Lane, Brisbane, CA 94005
(415) 468-5700

Corner

President's



DICK M. GLUMAC

All of our student guests at the November meeting were appreciative of our hospitality. Cal Poly students toured several facilities in the Bay Area, most of arrangements being provided by our members. For those arrangements, I wish to thank Tom Campbell (OCF Plant Tour), Dart Rinefort, Ron Ross (Embarcadero Center Tour), Aladdin Heating Corp., and Airport Engineers.

I hope that attendance at Chapter Meetings shall continue to be as good as it was in the first two meetings of the year.

As the calendar year (and for many a fiscal year) closes, now is the time to make tax deductible contributions to ASHRAE RESEARCH. Mail your donations to the Chairman - Lou Bedard.

The National Headquarters report that the 1977-78 Research donations exceeded all expectations and resulted in 34% increase in funds.

P.E. EXAM

Engineers seeking registration as Professional Engineers are advised of the December 15 deadline for returning applications to take the April 7 Civil Professional Engineering (P.E.) exam. The Engineer-In-Training (EIT) application deadline for the April 7 exam is February 2.

If you have questions about the exams--how to qualify or prepare for them--you are invited to a no-cost, no-obligation question-and-answer hour to be held at 7 p.m. on December 5 in Room 442 of the SBA Building at Menlo College in Menlo Park. The session is presented by the Professional Engineering Registration Program which offers EIT and P.E. reviews for the Civil, Chemical, Electrical, Mechanical, and Industrial Engineering exams. All EIT and P.E. review courses offered by the program are approved by the California Department of Education.

To obtain more information about the courses or to reserve a place at the introductory meeting, call (415) 593-9731 or write: Professional Engineering Registration Program, Department 41, P.O. Box 911, San Carlos, CA 94070

TREASURER'S REPORT

	9-30-78	10-31-78
Income	\$ 2738.10	\$ -0-
Expenses	\$ 111.50	\$ 14.74
Members Equity	\$10701.19	\$9641.85

COPY DEADLINE

In order to meet our publication dates, we have established the following as the last possible date, that copy for the FOG DISPENSER can be in the editor's hands:

Meeting date	Copy deadline
Jan. 4, 1979	Dec. 15, 1978
Feb. 1, 1979	Jan. 18, 1979
Mar. 1, 1979	Feb. 16, 1979
Apr. 5, 1979	Mar. 16, 1979
May 18, 1979	Apr. 18, 1979
June 7, 1979	May 18, 1979

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 - Phone 495-4552

1978-1979 OFFICERS

Dick M. Glumac President
Thomas A. Gilbertson ... Vice-Pres.
James M. Holden Secretary
Robert Phillips Treasurer

BOARD OF GOVERNORS
James G. Taylor Tom Campbell
Eugene Valerio

Know a Prospective New Member?

Contact Membership Chairman: Jim Nemechek . . 415/871-6808

Mail or Phone News to: Bill Schultz, Editor FOG DISPENSER MCC Powers 1305 Grandview Drive So. San Francisco, CA 94080 (415) 871-1944

MINUTES FROM LAST MEETING

The November meeting of the Golden Gate Chapter of ASHRAE was called to order by President Dick Glumac at the Engineers Club.

- A motion was made and seconded to approve the minutes of the October Chapter meeting. Motion carried.
- Unanimous approval was voted by the membership to amend the bylaws, as presented in the November issue of the Fog Dispenser, changing the office of Vice President to President Elect commencing with the next change of office.
- President Glumac made a plea for payment of all ASHRAE dues.
- Announcement made that the annual social would be a dinner dance to be held in February.
- Technical Program consisted of a panel on energy conservation measures. Members were: Gaye Yamagiwa - Honeywell, Don Delaney - Yamas Co., Bill Schultz - MCC Powers, Don McArthur - Robertshaw, Dennis Grusznski-Johnson Cont.
- Gaye Yamagiwa discussed the new controls meeting requirements of Title 24; Delta 1000 automation systems providing energy savings in large buildings from 10 to 25% annually; Smart thermostat project with PG&E for 5 to 50 ton A/C systems where utility Co. can change set points to conform with outside conditions; On giving solar research with Lennox.
- Don Delaney presented process controllers being used now on HVAC systems; Installations costing \$100 to \$200 per controller; Savings according to size of system.

...minutes continued...

- Bill Schultz talked about 4 new products: Energy Saver 1, Energy Saver 2, Energy Saver 3, System 170
- Dennis Grusznski discussed what is new in energy management, both hardware and software; Over the counter pneumatic components now available; Direct digital control coming - probably within 18 months.
- Don McCarthy - Industry committed to giving customers what they need.
- Questions from audience.
- Meeting adjourned.

INDUSTRY NOTES

CHARLIE NADIG now travels 11 Western States for the UNIFIN CO., manufacturers of industrial process heat exchangers. Charlie's office is in San Francisco

GUS SCHJAERVE recently joined the City of Palo Alto as a Municipal Engineer in the Utilities Department. Gus was with a consulting firm in San Francisco.

ATMA ADVANI, formerly a designer with a San Francisco consultant, is a new Senior Project Engineer with Cal-Air Conditioning in San Jose.

Congratulations to both WESTATES PACIFIC and UNITED SHEET METAL on their recent "marriage". PAUL HANZEL, recently with United, has joined DALE BRIGGS' growing sales staff.

Genial Yoram Wexelman is now holding down his corner of the universe at SYSKA AND HENNESSY in San Francisco.

PROPOSED AMENDMENT TO CHAPTER BY-LAWS

The concept of this proposed Amendment was approved by the Board of Governors at their September 11, 1978 meeting, and by the General Membership on October 5, 1978.

It is proposed that the By-Laws be amended to change the office of Vice-President to "President-Elect". A new position is not being created.

This change is strongly recommended by the Society, because it would give the President-Elect the authority to appoint the following year's Committee Chairmen in advance of their active participation, and to otherwise organize his planning for the coming year. (Committee Chairmen who are to attend Chapters Regional Conference Workshops must be appointed in advance of the meeting.)

The membership must approve the exact wording of the amendment. It will be presented at the November meeting, and if approved, it will be presented to the National Society for their approval, which is expected.

The text of the amendment follows:

- Article III, Paragraph 3.2 Change "Vice-President" to "President-Elect".
- Article V Paragraph 5.3 Delete entirely, and add:
- 5.3 The President-Elect. The President-Elect shall be the Chairman of the Program Committee, and shall automatically succeed to the office of the President at the conclusion of the President's term in office. In the absence of the President, the President-elect shall exercise the powers and perform the duties of the President. In addition, the President-Elect shall make his committee chairmen appointments in accordance with Article VI sufficiently far in advance of the Chapters Regional Conference as to permit attendance by his appointees at CRC Workshops in the period prior to appointees' active participation as Chairmen of the Chapter committee.
- Article VIII, Paragraph 8.1 Change "a Vice-President" to "the President-Elect".

Respectfully submitted:
Eugene L. Valerio, Past-President



Fog Dispenser

GOLDEN GATE CHAPTER



ASHRAE

VOLUME XVIII NO. 2

NOVEMBER, 1978

MEETING NOTICE

The second meeting of the Golden Gate Chapter for the 1978-79 year will be held at the Engineer's Club on the 16th floor of the Hong Kong Bank Building, 160 Sansome Street, San Francisco, on Thursday, November 2, 1978. The Social Hour will begin at 5:30 P.M., with dinner at 6:30 P.M.

NOVEMBER PROGRAM

Chairman: Tom Gilbertson

Subject: What is Really New and Effective in Temperature Controls and Energy Management.

Five representatives from the firms of MCC Powers, Johnson Controls, Robertshaw, Barber-Colman, and Honeywell will present what their firms have found effective, and engage in a panel discussion of our chapter's questions.

PRE-MEETING WORKSHOP

Chairman: Sherman Brown 6:00 -
6:30 PM
Upstairs

Topic: New Approaches to Solar Energy Systems

Speaker: Richard Hamilton,
V.P. Enecon

With over 15 years experience in the construction trade, Mr. Hamilton has developed the use of solar modules to provide a more cost efficient and energy efficient system.

*** NOTICE * NOTICE * NOTICE ***
There will be a raffle of the returned reservation cards! The one picked will receive a free dinner for the December meeting. Send in your reservation cards early.

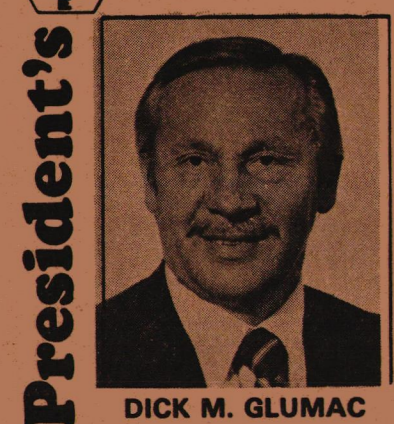
HONOR ROLL**OWENS-CORNING FIBERGLAS**

Insulation for HVAC, Plumbing, Industrial, Tanks

Sandy Sadowski, Tom Campbell - Mechanical Operating Division
Woody Hoogs, Stan Eng - Contracting Division

477 Forbes Blvd. So. San Francisco, 94080
(415) 873-7950

Corner



DICK M. GLUMAC

TREASURER'S REPORT

	8-31-78	9-30-78
Income	\$9163.09	\$ 2738.10
Expenses	\$1200.00	\$ 111.50
Members Equity	\$7963.09	\$10701.19

CONTINUING ED. IN IOWA

Currently under consideration by the Engineering Extension Service is the impact of the educational requirements of the Professional Registration Law. Iowa is the first state to enact this requirement.

In 1977 the General Assembly of the State of Iowa enacted a law that requires a professional or occupational licensee to participate in a continuing education program as a condition of license renewal. In anticipation of the requirements, professional engineers in Iowa have been discussing and studying the problem for five years.

I was pleased to see a large turnout at October meeting and hope that this trend will continue throughout the year. The attendance at our Chapter meetings is one of the rating numbers used in the scoring systems for the Presidential Award of Excellence. However, in my opinion more important award to me is to see the interest among the membership that brings us to the meetings and the Presidential Award is a pleasant byproduct of the thing that we do spontaneously.

One more subject that comes to my mind is a disturbing one. The tardiness of almost 90 members to pay their local dues for 1978-79 F.Y., you must admit, is a sloppy way to do business. The invoices went out in June, so four months later we are still waiting for 25% of members to join us officially. Consider this a gentle reminder and pay pronto.

This month's meeting is a bit special since we shall have as our guests approximately fifty students from Cal Poly and S.F. City College. I urge you all to help me in this important event for our younger generation and I am inviting you all to consider yourselves as hosts to our student visitors.

HONOR ROLL??

Perhaps you may not know the purpose of the Honor Roll listing on page 1 of every Fog Dispenser. The organization so honored has donated \$50.00 to the Chapter to partially offset publication and mailing costs. We'll welcome volunteers for this honor; call Bill Schultz to get on the list!

Know a Prospective New Member?

Contact
Membership Chairman:
Jim Nemechek . .415/871-6808

Mail or Phone News to:
Bill Schultz, Editor
FOG DISPENSER
MCC Powers
1305 Grandview Drive
So. San Francisco, CA 94080
(415) 871-1944

COPY DEADLINE

In order to meet our publication dates, we have established the following as the last possible date, that copy for the FOG DISPENSER can be in the editor's hands:

Meeting date	Copy deadline
Dec. 7, 1978	Nov. 17, 1978
Jan. 4, 1979	Dec. 15, 1978
Feb. 1, 1979	Jan. 18, 1979
Mar. 1, 1979	Feb. 16, 1979
Apr. 5, 1979	Mar. 16, 1979
May 18, 1979	Apr. 18, 1979
June 7, 1979	May 18, 1979

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 - Phone 495-4552

1978-1979 OFFICERS

Dick M. Glumac President
Thomas A. Gilbertson . . . Vice-Pres.
James M. Holden Secretary
Robert Phillips Treasurer

BOARD OF GOVERNORS

James G. Taylor Tom Campbell
Eugene Valerio

...minutes continued... described.

12. Project must comply with Division 2 of the standards which instruct inspectors in their responsibilities and outlines the legal responsibilities of the designing engineer who must sign the completed plans, certifying their conformance with requirements of the standards.
13. Meeting completed with questions from the audience.

INDUSTRY NOTES

Johnson Controls has occupied a beautiful new building built for them in the Crocker Industrial Park at 50 Park Lane, Brisbane, CA 94005, phone (415) 468-5700. Congratulations and best wishes to Dennis Gruszynski and his crew.

Welcome to Tom Karbowski, a new addition to the Mirov-Trane Sales Office in San Francisco. Tom is from the Midwest, and has been assigned the Marin County and north territory.

As of October 16, 1978 following members had not paid their dues according to the records of Duplicating Associates. It is necessary for Roster publication and Fog Dispenser mailing that you

1. Pay the dues (it is only \$10)
2. Fill out and mail the invoice sheet which was mailed to you in June.

Our treasurer Bob Phillips will have blank invoices at the November 2 Chapter Meeting, so bring your checks with you:

- | | | |
|-----------------------|----------------------|-----------------------|
| Ashfao C. Agboatwala | Robert H. Braun | Marinko Kraljevich |
| Julius A. Alfaro | Willis Botz | Calvin Laws |
| Arlen W. Allinger | Ron Campbell | Leonard W. Lewis |
| Bruce F. Benson | Carson, Bekooy, | Philip C. Lieb |
| W. H. Boganwright | Gulick & Assoc. | Tim Marshall |
| Raymond D. Caughron | Richard A. Charles | Eugene A. McCabe |
| Thomas H. Conroy | Edgerton Cooley, Jr. | Enrique C. Mercurio |
| Michael T. Cory | Marion E. Crouse | Lewis S. Pollock |
| Howard J. Dauphinee | Z Daniel Dever | P.E. Programs |
| Craig Aaron Elliott | Charles E. Doerr | Michael D. Rich |
| Dick H. Fujioka | Thomas Douglass, Jr. | Robert M. Roach |
| Arthur E. Gamble, Jr. | Sheldon Doolittle | Dottie Roark |
| Ben H. Goon | Pat Ecklund | Paul Rosenthal Co. |
| Charles S. Hallock | Paul H. Evens | Robert Schoenlank |
| Enneth Hill | Ronnie C. Fan | Hank J. Shastany |
| Richard Hum | Andrew E. Feiner | Robert H. Shuman IV |
| David E. Jacobs | Arthur A. Frieber | Medford J. Schwarz |
| Thomas H. Judson | Richard G. Fromm | Robert Vincent Smith |
| Eric G. Knox | Richard R. Grey | Erik W. Stephensen |
| Louis Koenig, Jr. | William B. Hancock | S. Charles Tarnoff |
| Milan R. Komadina | William T. Hagerman | Kenneth S. Tong |
| James E. Lynn | Tom Higashioka | David G. Waterworth |
| Thomas J. Molinaro | John R. Hightower | James R. Watson |
| Sherwood R. Peters | Michael Huggan | Herman R. Wehl |
| Darrell N. Robinson | Laurie D. Ingram | Kenneth H. Wilson |
| Dale Sartor | James E. Johnson | Edward W. Wintercalen |
| Fred H. Vann | Edwin R. Kaufman | James A. Witharm |
| James F. Williams | Rodeney G. Keif | Gay Yamagiwa |
| Wendell Backen | Charles W. Kopf | Kenneth T.M. Yu |

AUDIT REPORT

On September 12, the audit Committee met to review the books and to discuss the way in which the bookkeeping has been done and paid for over the years. The previous experience of Mesers. Holden and Barron was particularly important in giving continuity to the committee.

Based on the review, we certify the following:

- (1) the Financial Statement as of June 30, 1978, revised, a copy of which is attached, is accepted;
- (2) the Members Equity Account, as shown by actual bank balances, totals \$6270.03, while according to ledger account #299 it is \$3609.25. It is believed that this imbalance is of long standing and it is recommended that the Board determine how to rectify it.

Jack Palmer, who was the CRC-X Treasurer, joined the committee at a second meeting. Based on this review, we certify that the CRC-X financial report is accepted.

Respectfully submitted,
The 1978 Audit Committee: William Barron, Kaz Inouye, Paul Rosenthal

by Paul Rosenthal, Chairman

<u>ASSETS</u>	<u>TO DATE</u>
Checking Account	\$2,354.06
Savings Account	\$5,115.97
TOTAL ASSETS	\$7,470.03
 <u>LIABILITIES</u>	
Temp. Data Book	
Refund	\$1,200.00
 <u>MEMBERS EQUITY</u>	
General Fund	\$6,270.03
TOTAL LIA. & EQTY.	\$7,470.03

DISTINGUISHED MEMBER

Richard H. Nelson, a retired Life Member of the Society and our Chapter, has been honored by the Society with the title of Distinguished Fifty Year Member. Because of health reasons, Dick was unable to receive the handsome certificate at a National or Chapter meeting, so it was presented to him at his home by Gene Valerio recently.

PAY YOUR DUES

It's getting close to cut-off time! December is the dues receipt deadline of being included in the Roster. December is also the last Fog Dispenser for non-payers. **DON'T FORGET TO SEND IN YOUR DUES.**

'78 APPLICATIONS MAILED

The 1978 Applications volume of ASHRAE HANDBOOK was mailed starting the last week in July.

Reprints of the 1977 Fundamentals volume should be available around September 1, and an errata will be mailed shortly to all who received the original volume.

FINANCIAL REPORT

CRC-78 ASHRAE

GOLDEN GATE CHAPTER

INCOME

Registration Members	\$13,380.61
National	200.00
Golden Gate Chapter	5,000.00
	<u>\$18,580.61</u>
 REFUNDS	 \$ 891.20
 <u>TOTAL INCOME</u>	 \$17,689.41
 EXPENSES	 <u>\$16,408.70</u>
	\$ 1,280.71
Golden Gate Chapter Deficit	(\$ 3,719.29)

MINUTES FROM LAST MEETING

October 5, 1978

The first meeting of the Golden Gate Chapter of ASHRAE for the 78-79 season was called to order by President Dick Glumac at the Engineers Club.

1. A motion was made by Gene Valerio, acting at the request of the board of directors, to discontinue the raffle. The motion was seconded and defeated by a void vote of the membership. Grant Bentley volunteered to be chairman of the raffle which will be continued at the next meeting.
2. Gene Valerio read a proposed change in the bylaws, to create the position of President elect in lieu of Vice President. This enables the President elect to be insured of succeeding to the office of President without being elected, therefore making it possible to fill the various committee positions before the end of the chapter year. A voice vote approved putting the change into written form to be published in the Fog Dispenser and voted on by ballot at a later date.
3. Det Goepfert, Regional Research Chairman, made a report on the status of regional research fund raising and praised the Golden Gate Chapter's recent achievement in this field.
4. Wally Donley, Regional Chairman, presented the "Presidents Award of Excellence" to the Golden Gate Chapter. He noted that the Golden Gate Chapter was one of only three chapters in Region X to receive a Star Award with the award of excellence. While this was taking place, Bruno Morobito, 1977-78 National President, was unofficially present as a guest.
5. Madeline Pinsky, Vice Chairperson for Engineer's Week, sponsored by the S.F. Bay Area Engineers Council, made an announcement concerning the Engineers Dinner on February 22, 1979 and requested chapter attendance as well as participation in Engineers week activities.
6. The Speaker for the evening was Michael Majteles, Energy Systems Engineer, Professional Services Division, of Control Date Corporation, in Sunnyvale. He spoke on how computer programs are used to comply with design requirements under the "Energy Conservation Standards for New Non Residential Buildings."
7. CAL ERDA, E Cube, EP, and BLAST programs were discussed.
8. Non residential buildings consume more than 9% of the energy in the State of California. However, energy use for non residential buildings is growing at a rate twice that of overall energy consumption in the state.
9. Requirements of the Title 24 Standards may be met in 3 ways:
 - A. Energy budgets
 - B. Use of non depletable energy
 - C. Components performance standards
10. Annual energy consumption for a proposed HVAC design must be run through a certified computer analysis.
11. Sample of simple building program including forms required, calculations and routing of results whether successful or unsuccessful

ASHRAE GOLDEN GATE CHAPTER 1978 - 1979

Officers, Board Members, and Committee Chairmen and Chairwomen

President.....Dick M. Glumac	Board Member.....Thomas Campbell
Vice President..Thomas A. Gilbertson	Board Member.....James G. Taylor
Secretary.....James M. Holden	Past President...Eugene L. Valerio
Treasurer.....Robert Phillips	

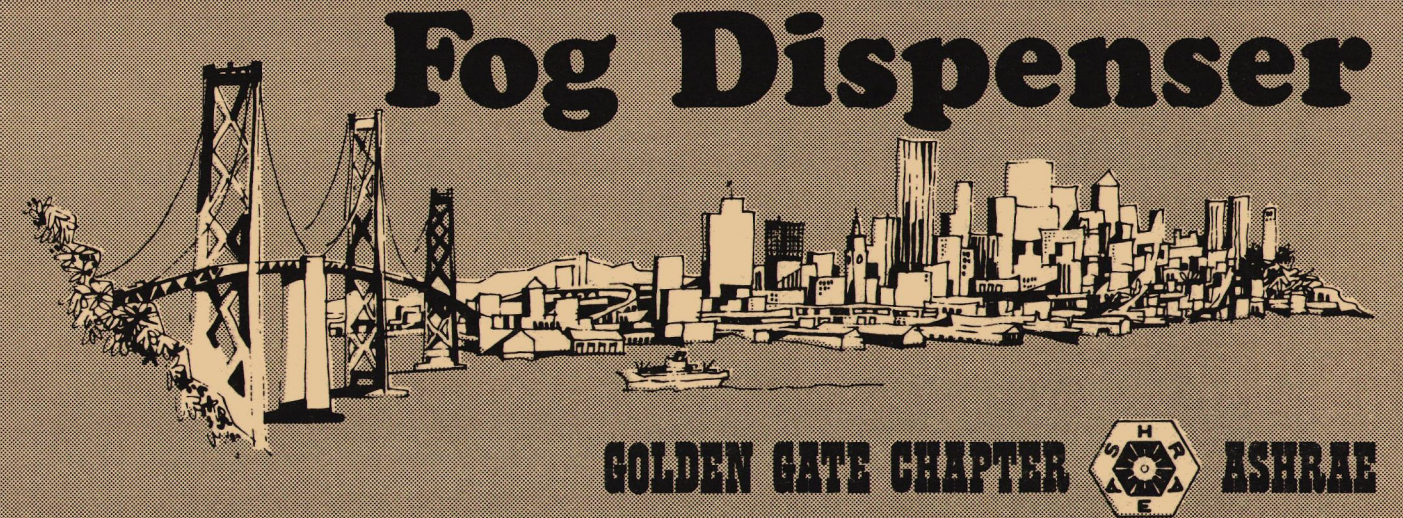
<u>COMMITTEE</u>	<u>CHAIRMAN</u>	<u>BOARD LIAISON</u>
Membership	Jim Nemechek	Phillips
Program.....	Tom Gilbertson	Gilbertson
Reception/Attendance.....	W. Hoogs	Valerio
Publicity.....	Dick Frenzel	Valerio
Finance.....	Bob Phillips	Phillips
Education	Roy Anderson	Taylor
Roster.....	R. Krauthamer	Campbell
Publications.....	B. Schultz	Phillips
Nominating	by elect. in January	Valerio
Auditing.....	comm. by appointm.	Campbell
Pre-Meeting Workshop.....	Sherman Brown	Gilbertson
Tennis Tournament.....	Glen Cheek	Campbell
Scholarships.....	Rich Wells	Holden
CRC 78	Gilbertson	Holden
Seminar	Sandy Sadowski	Phillips
Energy Conservation.....	Kevin Dowling	Taylor
Solar Energy.....	Dave Rifkin	Taylor
Code	Jim Breese	Campbell
Temperature Data Book.....	Dick Charles	Campbell
Raffle.....	none as of this date, see comment below	
Research Promotion.....	Lou Bedard	Phillips
ESCMT.....	Don Bryant	Phillips
Engineers Joint Council....	Tom Reinarts	Campbell
Historian.....	Max Wolff	Holden
Honors and Awards.....	Gene Valerio	Valerio
Golf	D. Stevens	Campbell
Social	H. Duncan	Valerio

CRC X - 1978

Delegate.....Tom Gilbertson
 Alternate.....Jim Holden

COMMENT REGARDING RAFFLE COMMITTEE:

At the July meeting of the Board it was decided to eliminate the raffle from our usual program for fund raising. However, this matter will be presented at the first regular meeting of the Chapter and will be decided by a vote.



VOLUME XVIII NO. 1

OCTOBER, 1978

MEETING NOTICE

The first meeting of the Golden Gate Chapter for the 1978-79 year will be held at the Engineer's Club on the 16th floor of the Hong Kong Bank Building, 160 Sansome Street, San Francisco, on Thursday, October 5, 1978. The Social Hour will begin at 5:30 P.M., with dinner at 6:30 P.M.

PRE-MEETING WORKSHOP

Chairman: Sherman Brown 6:00 - 6:30 PM
 Upstairs

Topic: Automated Systems for Building Energy Management

Speaker: Greg Braak

Mr. Braak, Sales Engineer with Johnson Service Company, will discuss feasibility and methods of using automated systems for building energy management.

OCTOBER PROGRAM

Chairman: Tom Gilbertson
 Subject: How Computer Programs are Used to Meet Title 24 Requirements as a Part of Energy Conservation Measures.
 Speaker: Michael Majteles, Control Data Corporation, Professional Services Division, Energy Analysis Group.

Mr. Majteles holds an M.S. from California Institute of Technology and a B.S. and M.A. from U. C. Berkeley. Prior to joining CDC, Mr. Majteles was a manager and developer of Solar Energy Simulation facilities as L.B.L., a physicist with PG & E, and worked with the International Atomic Energy Agency as a T.A. on assignment in Yugoslavia.

HONOR ROLL

MARINWAYS, INC.

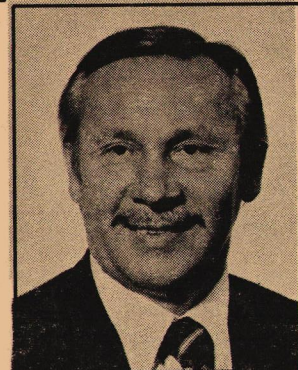
MECHANICAL CONTRACTOR

James M. Holden, President

1265 Folsom San Francisco, 94103
 (415) 431-4503

ASHRAE Corner

President's



DICK M. GLUMAC

As the first item of communication allow me to express my personal gratitude for the opportunity to serve the Chapter as your president in this new fiscal year.

I am pleased to announce that our Chapter was again the recipient of the "1977-78 Presidential Award of Excellence", thanks to many of you for your efforts in important activities of the Chapter which have contributed towards the points resulting in the "Award".

I am also grateful to many of you for volunteering to work on committees. It is very encouraging for me to find many enthusiastic members eager and ready to get involved in the work of the committees.

We regret to report that Art Tudury passed away in late July. Art was a life member of ASHRAE and founded Refrigeration and Power Specialties which was later purchased by Pameco-Aire. Art was 78.

RETIREE MEMBERSHIP

Headquarters has again received many inquiries regarding retiree memberships.

Members of the Society who have retired from active business, have completed 15 years of membership in the Society, and are 60 years of age or over can continue their Society membership grade at a reduced annual dues of \$10, but they must request this change themselves. Such retirees will retain all the privileges of their current grade and receive all publications regularly sent to members of that grade except ASHRAE HANDBOOK & Product Directory. Retiree membership, however, will not be credited toward service requirements for Life Membership.

SPECIAL GUESTS

Special guests of the Chapter for the October meeting will be Wallace Donley, Region X Director and Det Goepfert, Research Promotion Chairman.

Know a Prospective New Member?

Contact Membership Chairman: Jim Nemechek. .415/871-6808

Mail or Phone News to: Bill Schultz, Editor FOG DISPENSER MCC Powers 1305 Grandview Drive So. San Francisco, CA 94080 (415) 871-1944

COPY DEADLINE

In order to meet our publication dates, we have established the following as the last possible date, that copy for the FOG DISPENSER can be in the editor's hands:

Table with 2 columns: Meeting date, Copy deadline. Rows include dates from Nov 2, 1978 to June 7, 1979.

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 - Phone 495-4552

1978-1979 OFFICERS Dick M. Glumac..... President Thomas A. Gilbertson... Vice-Pres. James M. Holden Secretary Robert Phillips Treasurer

BOARD OF GOVERNORS James G. Taylor Tom Campbell Eugene Valerio

...minutes continued...

Society. Additional special certificates for appreciation were awarded to Bill Schultz for his unending and excellent work as the Fog Dispenser Editor, to Dick Porter for his activities as a fund raiser for the Chapter, to Dave Attard for his special solar activity. President Valerio took the opportunity to thank all members of the Chapter for their help and support in the year's effort and at that time presented the gavel to incoming President-elect Dick Glumac. As part of a tremendous show of emotion, Glumac then presented the certificate of appreciation to President Valerio and a very expansive gold and diamond pin.

6.The meeting was adjourned.

Respectfully submitted, Tom Gilbertson, Secretary

TREASURER'S REPORT

Table with 3 columns: Item, 4-30-78, 8-31-78. Rows include Income, Expenses, Members Equity.

MEETING GUESTS

- Michael Koff J.M.Nussbaum & Assoc. Paul Niess Western Plbg. & Htg. John Swahn Western Air Jeff Hughes Joseph Schauf Co. Rick Wilder Kaiser Engineers Jim Burrows Owens-Corning Dave Brockman York Bud Scheer York Rich Olds Safeway Steve Sabol Weather Systems Betty Gendler Adele White Shirley Pollock Mrs. Tom Simonson Mary Walker Durdica Glumac Pat Valerio Julie Taylor Pat Philips Ricky Holden

* NOTICE * NOTICE * NOTICE * There will be a raffle of the returned reservation cards! The one picked will receive a free dinner for the November meeting. Send in your reservation cards early.

INDUSTRY NOTES

New (old) faces at TEMPCO EQUIPMENT! From WESTATES PACIFIC, JAY RUBINS; and welcome back SHERM BROWN, who returns from Sacramento.

TEMPCO'S loss is Salt Lake City's gain in the person of JERRY KECHTER, who left a few months ago to take a principal position with SABOL and RICE, a major manufacturer's rep and distributor there.

Congratulations to GINO GOLACCHIA, who recently was appointed Northern California Sales Contract Manager with UNIVERSITY MECHANICAL's branch in San Leandro.

After many years of hard work in private practice, LEONARD W. LEWIS, Consulting Engineer, will take down his shingle after his current projects are complete. His employees have moved to other positions: HANK LUNSMANN to GARRETTSON, ELMENDORF, ZINOV, REIBEN; and GUS DA SILVA to MARION, CERBATOS & TOMASI.

Best wishes to ROGER LEFLER, who recently left GAYNER ENGINEERS to open his own office is San Rafael as LEFLER & ASSOCIATES.

HANK HUDDLESTON, a front row cheerleader at our meetings, announced his retirement from COLUMBIA MECHANICAL, and we wish him well. Taking over his spot is genial JIM PINE, long associated with RODONI-BECKER.

PLEASE PAY YOUR DUES

S. F. DESIGN TEMPERATURE

Many of you may have noticed a radical change in the summer design temperatures for several cities, especially for San Francisco. For example 1972 guide gives 80° F DB as 1% value while 1977 guide gives 74° F DB as 1% value for summer design. Many of us thought that this may be an error, and to obtain clarification our Carl Jordan wrote to T.C.-4.2, weather data committee.

Following is the reply given to Carl Jordan:

T.C.-4.2 (Weather Data Committee) has received numerous inquiries as to differences between weather design values found in the 1972 and 1977 handbook of Fundamentals. These differences are not errors, but rather reflect the differences in the period of weather record and data analysis techniques available at the time the analysis was done for each volume.

The weather data design values in the 1972 Handbook are based on 10 years of weather records generally covering the period from 1955 through 1964.

The values in the 1977 Handbook are based on 15 years of weather records. For the NOAA weather stations the period is from 1950 through 1964, and for the Air Force stations the period is from 1957 through 1971. An improvement has also been added to the data for small cities which are not actually at the collection station. For these cities an elevation correction is made in order to adjust the data recorded at the nearest station if it is at a different elevation. This will show the most differences in the mountainous areas of the country.

The Air Force is publishing a

... continued...

new manual of weather data (AFM 88-29) which is consistent with the weather data found in ASHRAE'S 1977 Handbook of Fundamentals.

Like the differences found in the ASHRAE volumes, the AFM 88-29 also shows differences from its predecessor 88-8, because the data bases are from different periods of record. We feel that these differences represent improvements in the design values because of the more extensive (and in some cases, more recent) periods of record.

ENERGY SLIDE SHOW

How do you achieve effective energy management? What is an energy audit? Is energy management practical at the residential level?

Two new slide shows on energy conservation prepared for a non-technical audience are available for your use.

The first one is titled "Managing Your Energy." It has fifty slides and a twenty-two page script. The second, "Home Energy Savings," has forty-seven slides and a twenty-one page script. They may be used independently or together.

Kevin Dowling (415/495-7400), Energy Conservation Committee Chairman, has copies of both of these slide presentations to loan to interested parties.

*** DUES * DUES * DUES**

Dues invoices were mailed out July 1. If you haven't returned it with your check, please do so soon. Did you notice dues are \$2 less this year?

MINUTES FROM LAST MEETING

June 1, 1978

Meeting was called to order by President Valerio at the Engineer Club at 8:04 pm.

1. President Valerio points out that this is our annual meeting for satisfying the requirements of our incorporation in the State of California.
2. Past Presidents and wives present are Alger, White, Gendler, Hardeman, Pollock, Kniveton, Bentley, Charles, Shea, Freedman, Duncan, Aronovsky, and Jordan.
3. Valerio reports contribution to City College of San Francisco, \$515.00, in support of their education program in air conditioning.
4. Annual committee reports give as follows:
 - A. Vice President Glumac reports success of the CRC '78 meeting and told the membership of the impending realignment of our Chapter into Region L; Arizona, Nevada, California and Hawaii. Region 1 will be Oregon, Washington, British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, and Alaska. The Alaska and Oregon Chapters objected to this realignment and introduced several motions opposing the impending change. Glumac reported that three of our Chapter members this year received special recognition inasmuch as Messrs. Simonson and Voltz were promoted to fellow and that Tom White received the Regional Award of Merit.
 - B. Tom White reports that President Morabito says that this was the finest CRC Conference he had ever attended and wishes that every other Chapter could do half as well.
 - C. Charles reports that the Temperature Data Book activity for the year depends on upcoming State action.
 - D. Seminar Chairman Taylor reports the excellent response and presented awards of gratitude to the speakers that were present.
 - E. Rinefort reports considerable UL Task Force activity with the City of San Francisco and that we are awaiting minutes from Building Superintendent Levy.
 - F. Rifkin reports extensive solar activity on that committee. Our Chapter was the only ASHRAE Chapter to present recommendations to the Solar Plumbing Code Committee and eight of our fifteen recommendations were accepted. No other ASHRAE Chapter had anything to offer.
 - G. Wells reports considerable workshop contributions and thanks the members for their support of this program at the Cal Poly.
 - H. McCabe reports research-promotion activity and that the Golden Gate Chapter has more than carried its share of the \$60,000.00 contribution that is raised in our Region.
5. President Valerio awarded Gold Appreciation Plaques to Taylor and Brown for Seminar Co-Chairmanship, Kevin Dowling for his Seminar activity and outstanding contribution to our

WORKSHIP RESULTS

The following letter was received by Gene Valerio:

Dear Gene:

I just received the May Fog Dispenser and noticed your appeal to members for the 1978 Golden Gate/Cal Poly Workship drive. As you well know, this very generous and successful financial support goes back more than 10 years, and has helped several young men through school, some of whom have returned to the Bay Area in the HVAC industry.

You might also be interested in knowing that five of our graduating Environmental Engineering students have accepted employment in the Bay Area, three with consulting engineers, one with a contractor, and one with a controls manufacturer. This pleases me for several reasons: They are going into strong ASHRAE territory; I'll get to see them on field trips; and your continued support of the Cal Poly Workship pays off by encouraging bright new people into the industry in your area.

Although I don't have exact figures, there are also several graduating Engineering Technology students in AC/R going your way, so we feel good this year about our contributions to your part of the state.

Congratulations on another successful Golden Gate chapter year.

Sincerely,

R.G. Keif
Professor
Environmental Engineering Department

LOST GOLF CLUB

One of our guests left his #7 Spaulding Elite iron near a green during the Crystal Springs Golf Tournament. Any help in locating it would be appreciated. Please contact Tom White (964-4024).

MEETINGS SUSPENDED

As is customary, regular meetings of the Chapter are suspended until October 5, 1978. Your Board continues to meet monthly on a regular basis throughout the summer, however.

DUES REDUCED

In an overwhelming spirit of generosity and inflation-fighting, the Chapter Board has set 1978-1979 dues at \$10 (down from \$12) and \$8 (down from \$9). The latter amount is charged new members who join after December 31. This should be a further incentive to pay your dues early next month when the invoices are mailed.

INDUSTRY NOTES

Hank Mouw can now be found doing his thing at GAYNER ENGINEERS.

Welcome to JOHN SWANN, new Northern California Branch Manager for WESTERN AIR & REFRIGERATION in Burlingame.

Congratulations to newly-licensed Professional Engineers in our industry:

- | | |
|----------------|----------------------|
| JEFF HUGHES | JOSEPH SCHAUF CO. |
| TEDDIE JACOB | GUTTMAN & MacRITCHIE |
| ALI CALGAZ | BUONACCORSI & ASSOC. |
| JERRY McCLEERY | INTERNATIONAL ENGIN. |
| JERRY NOLAN | L & H AIR CO. |

Did we miss anyone? Let us know for next time.

CHARLIE HARDEMAN of C.S. HARDEMAN, INC, and a Chapter past President, was recently named president of California SMACNA. This is an important position, Charlie, and we wish you well.

ROY SKOVER is now selling for TEMPCO EQUIPMENT, while JIM WHITE has moved into the sales slot here for LENNOX INDUSTRIES.



Fog Dispenser

GOLDEN GATE CHAPTER ASHRAE

VOLUME XV11 NO. 9

JUNE, 1978

MEETING NOTICE

The final meeting of the Golden Gate Chapter for the 1977-78 year will be held at the Engineer's Club on the 16th floor of the Hong Kong Bank Building, 160 Sansome Street, San Francisco, on Thursday, June 1, 1978. The Social Hour will begin at 5:30 P.M., with dinner at 6:30 P.M.

WORKSHIP APPEAL

The Chapter's annual support of the Cal Poly Workship Program is one of our more important responsibilities. Rich Wells has not received many responses to his earlier request for donations; he has mailed another request recently. Your support is needed now.

Your check must be mailed to Gene within a few days to reach him prior to the end of May.

FIRST CLASS MAILING

Your Chapter Board has decided that our Non-Profit Organization Bulk Mail Permit was cost effective, but ineffective in getting the Fog Dispenser to all of you on time. As of our last issue, all newsletters and other time-value mail will go First Class.

The problem was strictly with the Postal Service. This year the Fog Dispenser has been mailed on or before every scheduled date.

JUNE MEETING

The June meeting will feature installation of new chapter officers, transfer of duties, and awards for various individuals. All past presidents and their wives will be guests of the chapter.

HONOR ROLL PIPE SHIELDS, INC.

Pipe Supports, Pipe protection for Insulated Piping Systems
Fire-rated wall and floor sleeves, Seismic Restraints

William F. McClellan, President
Peter Valerio, Plant Manager

151 North Autumn San Jose, 95110
(408) 998-5420

PRESIDENT'S COLUMN

The signature at the end of this column will disappear with this issue, and will soon be forgotten---but this last issue gives me the opportunity to thank the many people who contributed their time and talents to make 1977-1978 another vintage year for the Golden Gate Chapter.

It's not possible to recognize each by name, but among those who deserve special thanks are Dick Glumac for his fine programs; Bill Schultz for his excellent "new" Fog Dispenser; Kevin Dowling, Jim Taylor, and Sherman Brown for a Seminar which set a net surplus record; Tom Judson for his Workshops; Glenn Cheek for his unfailing handling of attendance and name badge responsibilities; Dart Rinefort for his UL Task Force Chairmanship; Tom White and his entire CRC staff; and all the members of the Board who worked hard in keeping things (me) under control.

Finally, thanks to the girls in my office: Dorothy, Marlys, and Sarah; and to my wife Pat; all of whom had to be extra patient with me.

It has been an exciting year for the Golden Gate Chapter and I am honored to have been a part of it.

Best wishes,

Gene Valerio

ROBERT H. DUTTON

Bob passed away unexpectedly on May 9. He is survived by his wife and three children at the family home, 11 Bobolink Road, Orinda, CA 94563. Bob was Contract Manager at University Mechanical in San Leandro. We will miss him.

ELECTION RESULTS

The Teller's Committee headed by Bob Judd submitted their report, an excerpt of which follows:

...Following are the results of 148 ballots received:

- President: Dick Glumac 146
Richard Nixon 1
- Vice Pres: Thomas A. Gilbertson 144
- Secretary: James M. Holden 145
- Treasurer: Robert Phillips 145
Dick Porter 1
- Board Member: James Taylor 145
- Past Pres: Eugene L. Valerio 144

/s/ Robert H. Judd
/s/ Richard H. Wells
/s/ Rodney G. Roberts

TREASURER'S REPORT

	3-31-78	4-30-78
Income	\$ 555.76	\$ 433.15
Expenses	\$ 594.19	\$ 1032.41
Members Equity	\$16846.34	\$16247.08

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—Phone 495-4552

1977-1978 OFFICERS
Eugene L. Valerio..... President
Dick M. Glumac.... Vice-President
Thomas A. Gilbertson... Secretary
James M. Holden Treasurer
BOARD OF GOVERNORS
Robert Phillips Tom Campbell
Carl Jordan

COPY DEADLINE

In order to meet our publication dates, we have established the following as the last possible date, that copy for the FOG DISPENSER can be in the editor's hands:
Meeting date Copy deadline

The first meeting of the fall will be in October

Jun. 1, 1978 May 12, 1978

Know a Prospective New Member?

Contact Membership Chairman:
Jim Nemechek (415) 871-6808
or Committee Member

Dick Frenzel (415) 873-1660

Mail or Phone News to:
Bill Schultz, Editor
FOG DISPENSER
Powers Regulator Company
1305 Grandview Drive
South San Francisco, CA 94080
(415) 871-1944

NEWS FROM HEADQUARTERS

ENERGY SLIDE SHOWS AVAILABLE

How do you achieve effective energy management? What is an energy audit? Is energy management practical at the residential level?

Two new slide shows on energy conservation prepared for a non-technical audience are available for chapter use from ASHRAE headquarters. They are a natural follow-up to the 90-75 presentation so many chapters used last year.

The first one is titled "Managing Your Energy." It has fifty slides and a twenty-two-page script. The second, "Jome Energy Savings," has forty-seven slides and a twenty-one-page script. They may be used independently or together.

Both slide shows were sent to all regional chairmen. Chapters can obtain sets by contacting Ralph Burkowsky at ASHRAE headquarters. Remember also to send for the revised 90-75 presentation, "Standard 90-75 and the Energy Crisis," if you have not already done so. It is also aimed at the non-technical user of energy.

SOLAR-CONTROLS WORKSHOP

A U.S. Department of Energy-sponsored workshop on the Control of Solar Energy Equipment organized in cooperation with ASHRAE will be held in Hyannis, MA, May 23, 24 and 25, 1978. Ten-

...continued ...

tative topics for discussion include control of active systems and passive systems, dual control-performance monitoring systems, experience with installed systems, control modeling with system simulation programs, microprocessor control systems, peak load reduction programs, microprocessor control systems, peak load reduction techniques and control theory. For further information contact Mr. Francis de Winter, Altas Corp., 500 Chestnut St., Santa Cruz, CA 95060 (408)425-1211.

RETIREE MEMBERSHIP: WHO'S ELIGIBLE

Headquarters has again received many inquiries regarding retiree memberships.

Members of the Society who have retired from active business, have completed 15 years of membership in the Society, and are 60 years of age or over can continue their Society membership grade at a reduced annual dues of \$10, but they must request this change themselves. Such retirees will retain all the privileges of their current grade and receive all publications regularly sent to members of that grade except ASHRAE HANDBOOK & Product Directory. Retiree membership, however, will not be credited toward service requirements for Life Membership.

Have a nice Summer, we will see you again in October.



PLEASE MAKE CHECKS PAYABLE TO: ASHRAE Research

CRC IS A SUCCESS

The Golden Gate Chapter has done it again! The past triumphs of 1955, 1959 and 1970 were carried to a new high.

The City of San Francisco's reputation as "The City That Knows How" was enhanced by us. The many words of praise for the outstanding job done were best expressed by Society President Morabito, one who has had the exposure to know, when he said "This is the best CRC I have ever attended."

The well run Golf Tournament under almost ideal weather conditions, with chapter members winning the top prizes, flowed into the Welcome Cocktail Party. While the Thursday business session was in progress, Evangeline Charles escorted 45 ladies to the DeYoung Museum for a guided tour of the Avery Brundage Oriental Art Exhibit. Many ladies expressed regrets they would not have the time or opportunity of returning again and again as there was so much to see.

The Welcome Luncheon was well attended by 142 members and guests who heard President Morabito express incoming President Backer's theme of future Society strength from the Society's present strength.

Earthquake McGoon's reputation was untarnished by some 244 who made the place shake, rattle and roll. The change of location didn't cause the miss of a single beat. Many stayed on to return by cabs.

With the delightful weather we enjoyed during the whole conference, the 46 ladies who journeyed to Sausalito for lunch at the Alta Mira, abandoned the return trip by bus to enjoy a ferry ride. The ladies must have made quite an impression on the driver as Evangeline reported he seemed a bit sad over not having

...CRC continued...

them with him on the return trip.

The attendance at both of Tom Simonson's Technical Sessions was very pleasing to Tom. The design requirements for with-standing earthquake damage was complemented by the topic of legal design liabilities. The sessions were being discussed long after they were over.

Carl Jordan's Workshops were handled expertly. When the one on Evergy Conservation was obviously going to exceed its normal time limit, he quickly arranged for another room for its continuation.

Banquets are often dull affairs, but not this one. Starting with the regular Regency Hotel Friday tea dancing in the Atrium, 204 members and guests wended their ways to the ballroom for an exceptional prime rib of beef dinner followed by a short program of presenting golf prizes and Regional Merit Awards to Chapters. Most dance floors at banquets are empty by midnight, but not ours. Marianne and her group's rhythm was such that the better than half the attendees were surprised the closing of 12:30 A.M. came so quickly.

To my back-up, Herb Duncan, who has been Vice Chairman for the third time at Society meetings, to Gene Valerio whose shoulder I leaned on many times when I had concern for the success of the conference and to the following Committee Chairmen my deep thanks individually for your time and dedicated work in making our affair such a success.

Don Bryant	Reception & Registration
Dick Friedman	Ticket Sales
Bob Voelz	Printing & Mailing
Allen Wicks	Hotel Arrangements
Jerry Kechter	Thursday Night Social
Tom Simonson	Technical Sessions

...continued page 4...

...CRC continued...

JackKniveton	Hospitality
Carl Jordan	Workshops
Jack Palmer	Finance
Ed Merino	Posters
Jim Lazor	Banquet
Don Dickson	Transportation
Pete Filios	Golf
Dave Attard	Publicity
Pete Johnson	Welcome Luncheon
Evangeline &	Ladies Activities
Dick Charles	

Tom White
General Chairman - CRC 78

TABOR WINS GOLF

A total of 52 golfers participated in the annual Golden Gate Golf Tournament on May 10, 1978. The event was held at Crystal Springs Golf Club, located in Burlingame, California.

Lou Gross and Gil Tabor were low with gross scores of 81. Low net scorers were Gene West 71, Hert Gougen 72, J. Martin 73, Jim Wilson 73, Bill Schultz 74 and Dix Erwin 75.

Gene West won the prize for the longest drive on number 18. Bernie Beckius and Jim Wilson were second and third respectively.

Tom Brand was closest to the pin on number 13 at Eight and one-half feet. Gil Tabor and Tom White were second and third closest respectively.

Three of the wives joined the tournament to add a touch of class. They were Mrs. Palmer, Mrs. Danielson and Mrs. Peterson.

SMACNA DUCT MANUAL

Tom Heathorn announced the availability of this new and valuable Manual at the April meeting. Tom Gilbertson (415/543-6766) has order forms, or call the Greater Oakland SMACNA office, (415/635-8212) to order at reduced prices for ASHRAE members.

P. E. EXAM DEADLINE

Engineers seeking registration as Professional Engineers are advised of the July 10 deadline for returning applications to take the P.E. exams. The Engineer-In-Training application deadline is August 14.

If you have questions about the exam--how to qualify or prepare for it--you are invited to a no-cost, no-obligation question and answer hour to be held at 7 p.m. on July 6 in the SBA Building at Menlo College in Menlo Park. The session is presented by the Professional Engineering Registration Program, which will again offer E-I-T and P.E. review courses beginning in July. The courses are sponsored by the Peninsula Chapter of the California Society of Professional Engineers and include an E-I-T review and P.E. exam reviews for Mechanical, Electrical, Chemical, and Industrial Engineering

To obtain more information about the courses or to reserve a place at the introductory meeting, call (415) 593-9731 or write: Professional Engineering Registration Program, P.O. Box 911, San Carlos, CA 94070.

TEMPERATURE DATA BOOKS

Title 24 Energy Regulations (soon to be low) reference our Chapter's "Recommended Design Temperatures" Booklet published in 1965. An updated version may be available in 1978, but in the meantime, your Board decided to reprint the 1965 edition.

To obtain a copy, send a check for \$3.00 payable to "ASHRAE Golden Gate Chapter" to:
ASHRAE % Duplicating Assoc.
370 Brannan Street
San Francisco, CA 94107

... headquarters continued ...
 quently loses its cover, return
 it to ASHRAE, Attention Circula-
 tion Dept., C.O.D. The use of
 C.O.D. will facilitate ASHRAE's
 payment of the return postage
 without having to issue many small
 checks to repay members. A
 replacement copy will be sent
 to you as rapidly as possible.

If you have not yet received
 your 1977 copy, ask yourself
 these questions:

1. Did I pay dues in 1976-77?
2. Did I change my ASHRAE
 mailing address between
 May and December 1977?

Answering "Yes" to No.1 and
 No. 2 means that you are one of
 the unlucky missing labels. Please
 contact the ASHRAE Membership
 Department to obtain a replace-
 ment copy.

If you changed employment in
 1977, your book may have gone to
 your former employer and not
 forwarded or returned to us.
 Copies are being mailed to all
 those who changed addresses and
 this should be completed by late
 March.

If you have any problems con-
 cerning the 1977 Fundamentals
 Volume, contact Carl Mac Phee,
 Director of Publications
 (212) 644-7880.

LOANS AVAILABLE FOR WOMEN ENGINEERS

The Business and Professional
 Women's Foundation, with grants
 from the Exxon Education Foundation
 and General Motors Corporation, is
 continuing its efforts to in-
 crease the number of women in
 professional engineering fields.

The Loan Fund for Women in Enginee-
 ring Studies, established in 1976,
 is designed to attract those women
 who are in their last two years
 of current undergraduate study,
 and recent graduates in engineering
 or related fields. It is also
 for those working in engineering
 who want to specialize or move
 into management, and those who
 have been trained in engineering

... headquarters continued ...
 or technical fields but are not
 working in engineering.

The BPW Loan Fund offers several
 practical alternatives for women
 interested in engineering. Women
 at "mid-career" in engineering may
 obtain assistance with bachelor
 degrees in engineering or B.S.
 degrees in math or the physical
 sciences, not presently employed,
 or working in fields other than
 engineering, may benefit from
 refresher or conversion programs.
 Women candidates for bachelor or
 A.A. degrees in engineering or
 engineering technology, and women
 beginning their 3rd year of under-
 graduate training may obtain assis-
 tance to continue in engineering or
 engineering technology programs.
 Undergraduate women may also pursue
 their last 2 years of undergraduate
 training in double or dual degree
 programs in engineering and the
 liberal arts.

Any woman in her final two years
 of a program accredited by the
 Engineer's Council for Profession-
 al Development will be eligible
 to apply for a loan. A parti-
 cular and unique advantage of the
 loan is its applicability to
 such expenses as housing, trans-
 portation and child care--
 expenses not usually covered
 by educational loans.

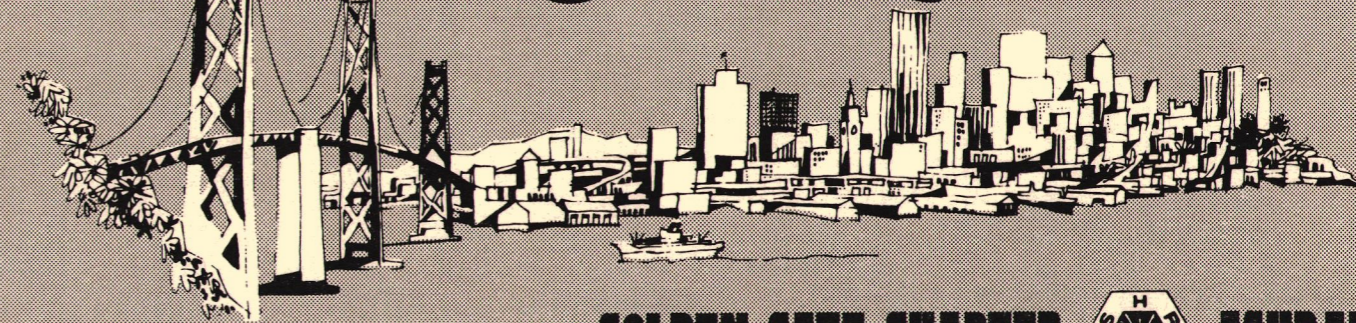
Further information about the
 loan program may be obtained from
 the BPW Foundation, 2012
 Massachusetts Ave. NW, Washing-
 ton, D.C., 20036

RESEARCH PROJECTS

The Society is currently spon-
 soring 33 active research projects.
 The most recent project, approved
 by R&T at its Atlanta meeting,
 is RP-227 "Analysis of Exhaust
 System Degradation" at the Uni-
 versity of Wisconsin - Madison.

SUPPORT YOUR LOCAL CRC

Fog Dispenser



GOLDEN GATE CHAPTER  **ASHRAE**

VOLUME XVII NO. 8

MAY, 1978

NO MAY MEETING

There will not be a regular meeting
 in May. Come to the CRC and
 Dinner Dance.

TEMPERATURE DATA BOOKS

Title 24 Energy Regulations (soon
 to be low) reference our Chapter's
 "Recommended Design Temperatures"
 Booklet published in 1965. An
 updated version may be available
 in 1978, but in the meantime, your
 Board decided to reprint the 1965
 edition.

To obtain a copy, send a check for
 \$3.00 payable to "ASHRAE Golden
 Gate Chapter" to:

ASHRAE % Duplicating Assoc.
 370 Brannan Street
 San Francisco, CA 94107

Dates to Remember

- May 10 - 13--CRC 78
- May 12-----CRC Dinner Dance
 (Annual Social)
- June 1-----General Meeting
- June 25 - 29-Annual Meeting
 Albuquerque

SMACNA DUCT MANUAL

Tom Heathorn announced the avail-
 ability of this new and valuable
 Manual at the April meeting.
 Tom Gilbertson (415/543-6766)
 has order forms, or call the Greater
 Oakland SMACNA office, (415/635-8212)
 to order at reduced prices for
 ASHRAE members.

SUPPORT YOUR LOCAL CRC

HONOR ROLL

FLOW TEST INC.

GERRY DeREUS - President

Air and Hydronics Balancing and Testing
 Duct Pressure Testing Mechanical Surveys
 Sound and Vibration Testing

988 Mission Street San Francisco, CA 94103
 (415) 495-6643

WORKSHIP APPEAL

The Chapter's annual support of the Cal Poly Workship Program is one of our more important responsibilities. Rich Wells has not received many responses to his earlier request for donations; he has mailed another request recently. Your support is needed now.

TREASURER'S REPORT

	2-28-78	3-31-78
Income	\$ 6870.60	\$ 555.76
Expenses	\$ 7215.44	\$ 594.19
Members Equity	\$16788.80	\$16846.34

MEETING GUESTS

- Steve Taber - Hardison & Komatsu
- Norman Daniels - Dependable HTG.
- John Westbrook - Nova Energy Syst.
- Bill Giussi - Johnson Control
- Milfred Young - R.F. MacDonald
- Mike MacDonald - R.F. MacDonald
- S.K. Datta - Don Bently
- Cyr Sjoberg - J.L. Meyers Co.
- Dick Hughes - Frederick Kohloss
- Dan Emke - Robertshaw Control
- Dirk Van Ulden - PG&E
- Bill McIntosh - PG&E
- F. Armstrong - PG&E
- George Karman - York
- Gordon Walker - Yomas
- David Brockman - York
- Sharon Morse - SMACNA
- Georgina Anderson - Acurex
- Larry Anderson - Acurex
- Steve Ayraud - U of Santa Clara

We regret to inform you of the recent passing of two of our prominent Life Members.

Karl F. Baldwin, Jr.

Karl died suddenly on March 25, 1978, at his home, 615 B Lexington St., El Cerrito, CA 94530. He is survived by his wife and three children. Karl was a Life Member, and a Past President of the Golden Gate Chapter ASHVE, 1949-50. He retired 2 1/2 years ago; at that time he was a project engineer with Bechtel Power Corporation and a registered engineer in California.

Edward M. Hill, Jr.

Ed died unexpectedly on April 3, 1978 at his home, 236 Richardson Drive, Mill Valley, CA 94941. He is survived by his wife and a son. Ed was a Life Member and a registered engineer in private practice in the San Francisco area for many years. He was semi-retired the past four years.

NEW MEMBERS

The Golden Gate Chapter welcomes the following new members:

- Milan Domadina - A.R. Peterson
- Larry Graves

SUPPORT YOUR LOCAL CRC

CRC NEWS

In just a few days our chapter will be hosting the Chapters Regional Conference. By this time everyone should have received the CRC program outlining the events & topics for the meeting. Since the printing of the program a few additional arrangements have been finalized which the Committee Chairmen would like to announce.

BANQUET

Jim Lazor has announced the following items are firm for the Banquet on May 12.

1. Tea dancing from 5:30 to 8:00 P.M. in the hotel lobby with no host bar.
2. Dinner and dancing in Ballroom "B" located on the street level. Dinner at 8:00 P.M.
3. Dancing to Walt Tolleson's group from 9:30 to 12:30 A.M. with no host bar in the Ballroom.
4. Dinner will be Roast Prime Rib of Beef.
5. The price is \$22.50/person for those who purchase tickets early or \$25.00/person at the door.

TECHNICAL SESSIONS

Tom Simonson has announced his speakers for the Technical Sessions. Topic: Design Problems and Solutions to meet Earthquake Resistance Standards.

1. Carl Jordan - Mechanical Engineer with Skidmore Owings & Merrill.
2. Henry J. Degenkolb - Structural Engineer with his own firm.
3. Derek Parker - Architect with the firm of Anshen and Allen.

Topic: Legal Liability of the Design Engineer.

1. Ernest Y. Sevier - Attorney
2. Edward B. Howell - President of Design Professional Insurance Co.
3. Paul R. Rosenthal - Consulting Mechanical Engineer.

... CRC News continued ...

TICKET SALES

Dick Friedman has informed us that the majority of the ticket sales have come from the visiting chapters, and the local ticket sales are lagging. It is quite possible that our Chapter could be \$5000.00 in the red for hosting the CRC if everyone does not participate in the events.

RESEARCH DRIVE

All members have been mailed an appeal for donations to ASHRAE Research by our Promotion Chairman, Gene McCabe. Please respond immediately and generously to your "Investment in the Future".

NEWS FROM HEADQUARTERS

1977 HANDBOOK: DELAYED, DAMAGED, OR DISAPPEARED?

The 1977 Fundamentals Volume of ASHRAE HANDBOOK & Product Directory was mailed in December, 1977 to all members except students and retirees. The delay was due to a combination of just about every conceivable problem which could have arisen (Murphy's Law?) after a strike at the original printing plant in April.

Since the mailing, several new problems have become apparent: damage to books in transit, breaking of the binding, and failure of labels to adhere to cartons.

These problems have been discussed with the printer, who has provided the following explanation:

"The air cell cartons into which the books are packed did not always sustain the anticipated abuse of the Postal Service, resulting in:

- a. Crushed end protectors.
- b. Torn or broken backbone hinges between the front cover and the first page of the book."

If your copy was received in poor condition or if it subse-

... continued page 4 ...

Know a Prospective New Member?
 Contact Membership Chairman:
 Jim Nemechek (415) 871-6808
 or Committee Member
 Dick Frenzel (415) 873-1660
 Mail or Phone News to:
 Bill Schultz, Editor
 FOG DISPENSER
 Powers Regulator Company
 1305 Grandview Drive
 South San Francisco, CA 94080
 (415) 871-1944

COPY DEADLINE
 In order to meet our publication dates, we have established the following as the last possible date, that copy for the FOG DISPENSER can be in the editor's hands:
Meeting date Copy deadline
 Jun. 1, 1978 May 12, 1978

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 - Phone 495-4552
 1977-1978 OFFICERS
 Eugene L. Valerio..... President
 Dick M. Glumac.... Vice-President
 Thomas A. Gilbertson... Secretary
 James M. Holden Treasurer
 BOARD OF GOVERNORS
 Robert Phillips Tom Campbell
 Carl Jordan

RESEARCH NEWS

The Golden Gate Chapter and some of its members have been regular contributors to ASHRAE Research in a rather modest way over the years. We expect to turn this around and get greater participation this year.

The time is Now to think and plan for this year's contribution:

- if you represent a company, plan to budget a substantial contribution for 1978.
 - if you are an individual, start thinking of making an investment in - Research for the Future.
- The scope and objective of ASHRAE is as follows.

"The Research and Technical Committee of ASHRAE, subject to the direction of the Board of Directors, shall conduct and coordinate basic research and technical studies in the field of heating, refrigeration, air conditioning and ventilation, subject to the provision that these activities shall be devoted to the public welfare and general benefit, and shall not be designed to promote any individual, private or commercial interest."

It is more important than ever that we expand our research activities as defined above. This can be done only with increased financial support by the Society's individual and company member.

You will be receiving a mailing with more details as to how you can contribute. Plan now so that the Golden Gate Chapter's "participation in the future of our industry" will continue to grow.

(Adapted from an article by Bill Biggar of the Southern California Chapter.)

SUPPORT YOUR LOCAL CRC

SMACNA DUCT MANUAL

A new HVAC Duct System Design Manual for engineers and contractors is now available from SMACNA, whose Duct Design Committee worked for four years in its preparation. Some of their work was done in concert with ASHRAE's TC5.2 Technical Committee.

The Manual presents practical duct design procedures rather than theory behind duct design, and in some respects is easier to use than the procedures found in the ASHRAE Handbook of Fundamentals.

Samples of the Design Manual and a separate booklet of Tables and Charts reprinted from the Manual will be available for inspection at the April General Meeting. Copies may be ordered at special reduced rates (including shipping) of \$11.00 for the manual and \$5.00 for the charts from the Greater Oakland SMACNA office, (415) 635-8212.

----Tom Heathorn

(Ed. Note: Tom Heathorn, President of N.V. Heathorn, Inc., Oakland-based mechanical contractors, is a Chapter Member and a member of the National SMACNA Duct Design Committee.)

SO YOU'VE JOINED
A CLUB

*Some members keep their club so strong
While others join just to belong
Some dig right in. . . some serve with pride;
Some go along just for the ride.
Some volunteer to do their share
While some lie back, and just don't care.
On meeting days, some always show,
While others simply never go.
Some do their best . . . some build . . . some make . . .
Some drag . . . some pull . . . some don't . . . some do . . .
Consider . . . which one of these are you?*

CRC 78 REPORT

On May 10, 11, 12 & 13 the Golden Gate Chapter of ASHRAE will be hosting the CRC Annual Meeting at the Hyatt Regency Hotel in San Francisco. The major topics for this years technical sessions will be 1.) Earthquake Standards & 2.) The Legal Liability of the Design Engineer. We have scheduled activities throughout the Conference - we encourage all of you to attend!

Wednesday - May 10

A golf tournament is scheduled for the men and women at the Crystal Springs Golf Course. Starting time is 10 AM.

Thursday - May 11

A ladies trip has been arranged to visit the DeYoung Museum in Golden Gate Park along with a guided tour of the Avery Brundage Chinese Exhibit.

The Presidents Luncheon is being held at the Hotel.

A "Roast-Beef Buffet Supper" has been planned for Thursday Evening at Earthquake McGoons, which has been relocated to the Rathskeller Restaurant on Polk & Turk Sts. Bus transportation will be provided from and to the Hotel.

Friday - May 12

The ladies are invited on a trip across the Golden Gate Bridge to Sausalito with a short stop at the Palace of Fine Arts. Lunch will be served at the Alta Mira Hotel.

The Presidents Ball is the highlight of the evening. The attire is semi-formal.

Tickets for all the events can be purchased from Dick Friedman at 234-9322. (see ticket information elsewhere in Fog Dispenser)

To make our 1978 Regional Conference a success, we urge all chapter members to attend the weeks activities. Dave Attard
Publicity Chairman

NEW MEMBERS

The Golden Gate Chapter welcomes the following new members:

- Philip Lieb - Energetics Sci.
- George Murphy - East Bay A.C.
- Dwight Sale - Guy F. Atkinson
- Roger Sonderegger - Lawrence Berk.Lb.
- Shin-Hwa Ho - Gayner Engr.
- Barbara Steiner

MEETING GUESTS

- Jeff Hughes - J. H. Schauf
- John Murphy - S.F.P.D.
- Sachi Hanson - Gayner
- Marcy Moschetti - Marin Ways
- Kathy Aronson - Hong Kong Bank
- W. J. Lorenz - American Can
- David Brockman - York
- Paula Harding - Indian College
- Tommy Sin - SOM
- Marie Cuvello - Bechtel
- Ross Sherrill - Thermoscope
- Yolanda Lopez - Engineered Air
- Sharon Morse - SMACNA
- Miki Inouye
- Lois Anderson
- Jean Tarnoff
- Van Charles
- Dotty Rinefort
- Marilyn Jacob
- Suzy Lescure
- Diane Schultz
- Clara Goon
- Sally Sprague
- Juanita Odsterm
- Virginia Gifford
- Sharon Morse
- Kitty Nemechek
- Ricky Holden
- Mandy Filios
- Mildred Mouw
- Dorothy Brose
- Mary Walker
- Pat Valerio
- Juanita Gilbertson
- Barbara Hughes

NOTICE * NOTICE * NOTICE * NOTICE
There will be a raffle of the returned reservation cards! The one picked will receive a free dinner for the June meeting. Send in your reservation cards early.

MINUTES FROM LAST MEETING

March 2, 1978

Meeting was called to order at 7:18 pm in the Engineers Club in San Francisco.

- 1. Motion was made and seconded for approval of the February, 1978, meeting minutes. Motion was carried.
2. Nominating Committee reports the selection of a slate of nominees as listed in the Fog Dispenser.

President - Dick Glumac
Vice President - Tom Gilbertson
Secretary - Jim Holden
Treasurer - Robert Phillips
Two-year as Board Member - Jim Taylor
Past President - Gene Valerio

Motion was made and seconded that the slate of nominees be accepted and the nominations be closed. Motion was carried.

- 3. President Valerio announced a Symposium on the 7th of April, 1978, intitled "Working with Cal ERDA Computer Programs."
4. Tom White encouraged the ladies participation in the CRC-78 on the 10th to the 13th of May.
5. Dick Charles asks Chapter wives to participate as guides and hostesses at the CRC-78.
6. Dick Glumac asked participation of all members in the CRC events.
7. Vice President Dick Glumac introduced Patrolman John Murphy, member of the San Francisco Police Dept. Officer Murphy is with the crime prevention bureau with special emphasis on senior

...minutes continued...

citizens and safety for women. Murphy has worked as a narcotic and undercover agent and has spent considerable time assigned to the decoy unit.

- a. Murphy reports that he was robbed personally 80 times in the last year when acting as a decoy.
b. 57% of the arrests were for people 17 years and younger. First convictions in San Francisco normally carry probation, second conviction normally meet out 3 to 6 months in confinement.
c. Murphy suggests that we avoid carrying purses as these are targets for would-be thieves.
d. The use of an escort and remaining alert on the streets will help to reduce the possibility of robbery.
e. The San Francisco Police Dept. has achieved a 93% conviction rate using their decoy unit when coupled with TV.
f. As a possible solution, he suggests carrying a "bogus" purse in your pocket of clear plastic showing an old credit card and two or three dollars and a few cents loose change. If the thieves find this on you they immediately see that you have given them what they wanted and they will more than likely not harm you.
g. Murphy reports that the use of a shrill alarm whistle that can be purchased through the San Francisco Police Dept. for a group of 50 of more

TEMPERATURE DATA BOOKS

California Title 24 Energy Regulations reference our Chapter's "Recommended Design Temperatures-Northern California. The 1965 data has been reprinted as the Third Edition, November, 1977.

To obtain a copy, send a check for \$3.00 (includes postage) payable to "ASHRAE GOLDEN GATE CHAPTER" to:

ASHRAE %Duplicating Associates
370 Brannan Street
San Francisco, CA 94107

INDUSTRY NOTES

TOM CAMPBELL of OWENS-CORNING FIBERGLAS and DAVE RIFKIN of MARINA HEATING are members of the Solar Energy Code Committee of the International Association of Plumbing and Mechanical Officials. This organization promulgates the Uniform Plumbing Code.

TOM REINARTS of KELLER & GANNON, consulting engineers, has turned author. Tom currently has a series of four articles on building automation systems being published in "Specifying Engineer" magazine.

SOCIETY AWARDS/COMMITTEE QUESTIONNAIRE

We are attempting to update our knowledge in these areas in preparation for the CRC. Please send the following information on a copy of this form immediately to Dick Glumac, 1 Embarcadero Center, San Francisco, CA 94111.

AWARDS AND ACHIEVEMENTS (use separate sheet if more space is required)

- 1. I have received the following Society awards:
Fellow ____ Alco ____ Other (list) ____
2. I have had the following articles or papers published (list title, publication, and date published)
3. Other special activities or achievements which might qualify me for an award or other special recognition are:

COMMITTEE SERVICE

I would like to serve on the following Technical Committees:

NEWS FROM HEADQUARTERS
STANDARD FOR SOLAR COLLECTORS

The Air-Conditioning and Refrigeration Institute has announced the publication of ARI Standard 910-77 for Solar Collectors.

The standard was developed by the Engineering Committee of the ARI Solar Systems Section. It is a thermal performance standard which will provide ratings of solar collectors.

The standard applies to factory-made solar collectors as defined in the standard using either air or liquid as the heat transfer fluid. It may be used for:
a) heating service water or other fluids and b) heating or cooling of buildings.

Copies may be obtained from the Air-Conditioning and Refrigeration Institute, 1815 North Fort Myer Dr. Arlington, Virginia 22209. A payment of \$3.50 must accompany all requests.

LIFE-INSURANCE CREDIT

We are pleased to report that members insured under our approved Life Insurance Plan will receive a credit on their April 1, 1978 Notice of Payment Due equal to 45% of the amount they contributed during the policy year ending September 30, 1977. Credits of this type make the plan very attractive and it is hoped that they will continue to be available in future years. They cannot, of course, be promised or guaranteed.

...headquarters continued...

This might be a good time for all members to assess their current insurance needs. All inquiries regarding the Life Insurance Plan or any other plan in our Group Insurance Program should be made to the Administrator, 1707 L Street, N.W., Washington, D.C. 20036

PUBLICATIONS CATALOG

Headquarters doesn't seem to have told anyone, but we have learned that the 1977-1978 Publications Catalog is available. Apparently it is not being routinely mailed to everyone.

For a copy, write to ASHRAE Publications Sales, 345 East 47th Street New York, N.Y. 10017.

ADDRESS CHANGES

Some members in outlying areas have been receiving our bulk-mailed Fog Dispenser at their Homes later than they should. We can't speed up the Postal Service, but we can make a suggestion.

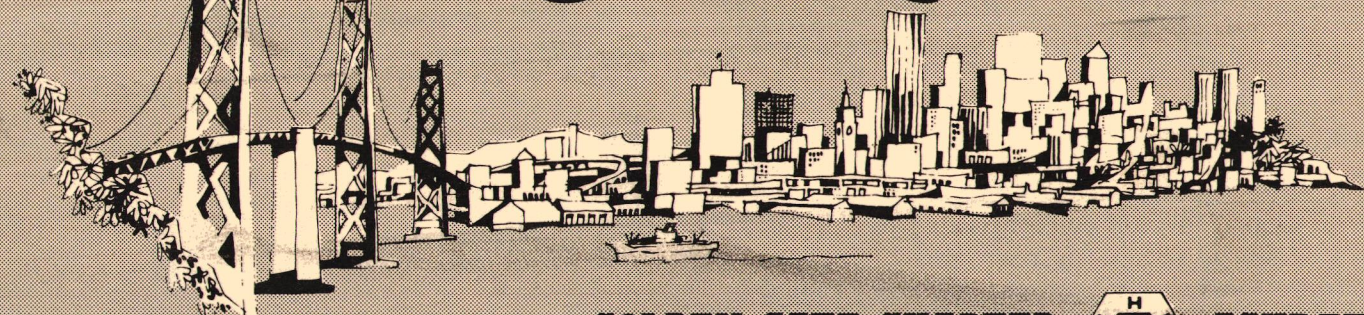
If you are so affected, and you have a City or Upper Peninsula business address you can use, we'll be pleased to change our address plate. Drop a note to ASHRAE Golden Gate Chapter, 370 Brannan Street, San Francisco CA 94107 (this is our mailing service).

Be sure to notify our mailing service of your new address if you move. You must also notify Headquarters: ASHRAE Membership Department, 345 East 47th Street, New York, N.Y., 10017.



PLEASE MAKE CHECKS PAYABLE TO: ASHRAE Research

Fog Dispenser



GOLDEN GATE CHAPTER  **ASHRAE**

VOLUME XV11 NO. 7

APRIL, 1978

MEETING NOTICE

The seventh meeting of the Golden Gate Chapter for the 1977-78 year will be held at the Engineer's Club on the 16th floor of the Hong Kong Bank Building, 160 Sansome Street, San Francisco, on Thursday, April 6, 1978. The Social Hour will begin at 5:30 P.M., with dinner at 6:30 P.M.

PRE-MEETING WORKSHOP

Chairman: Tom Judson 6:00-6:30 upstairs

Topic: Financial Feedback from Solar Energy Systems which have been On-Line for at Least One Year.

Speaker: David Rifkin, Marina Heating and Air Conditioning, Hayward, California.

Mr. Rifkin is Chairman of the Solar Energy Committee and he will be assisted by his committee members.

APRIL PROGRAM

Chairman: Dick Glumac

Subject: Operating Experience of Solar Installation at Santa Clara Community Center.

Speaker: Dr. Lawrence B. Anderson, Science and Technology Coordinator for Energy Programs. Acurex Corporation

Steve Ayroud - University of Santa Clara Student

Dr. Anderson spoke to the Ashrae group two years ago on the subject of Solar Design at Santa Clara Community Center. This program will bring us up to date on final construction, start up and actual operating experience.

SUPPORT YOUR LOCAL CRC

HONOR ROLL

AIR FILTER SALES & SERVICE COMPANY
Division of ABMI

Manufacturer and Distributer of Low Efficiency through HERA Filters; Filter Service and Duct Cleaning

Bruce White Bob Nichols Frank Irwin

1500 Davidson Avenue San Francisco 94124 (415) 285-7350

PRESIDENT'S COLUMN

Our thanks to ycu, Lewis Pollock, and Messrs. Alger, Charles, Harde- man, and Rinefort of your Nominat- ing Committee for your work and deliberations in presenting us with a slate of officers (and my replacement!) for next year.

I don't think the ladies at our meeting last month were at all disappointed in our program, though our featured speaker regrettably had to cancel. John Murphy, an articulate young officer from the San Francisco Police Depart- ment, made a truly outstanding presentation on self-protection of interest to all of us. We thank you, John and to Dick Glumac, who found him!

Please, members! Plan now to at- tend CRC 78 in May. Except for a few short Delegate's Executive Sessions, all programs are open to all members. Come see how ASHRAE works!

Gene Valerio

Dates to Remember

- April 6-----General Meeting
- May 10 - 13--CRC 78
- May 12-----CRC Dinner Dance
(Annual Social)
- June 1-----General Meeting
- June 25 -29---Annual Meeting
Albuquerque

GEORGE W. DALE

We regret to announce the passing of George Dale on March 1, 1978 after a short illness. George was President and General Manager of Spartan Associates in San Ramon, and a Chapter member. He is survived by his wife Rosemary and children. The family home is at 2101 Dunblane Court, Walnut Creek, CA 94598. We will miss him.

HISTORY OF THE GAVEL - HELP!

Every year a very large gavel is passed to the new Chapter President. This gavel was made for us by the Sacramento Valley Chapter, in appreciation for the service the Golden Gate Chapter rendered in spawning the Sacramento group. Someone has said that it used to be passed between Chapters each year at joint meetings, and now we are seriously trying to develop its history further.

Tom White knows a few details; the Sacramento people can't remember. Does anyone have any details: names, dates, events surrounding the origin and hist- ory of this gavel?

Please let Max Wolff, our Chapter Historian, know as quickly as possible. Max can be reached at (415) 781-6988 days, (415)453-3593 evenings.

Know a Prospective New Member?

Contact Membership Chairman:
Jim Nemechek (415) 871-6808
or Committee Member

Dick Frenzel (415) 873-1660

Mail or Phone News to:
Bill Schultz, Editor
FOG DISPENSER
Powers Regulator Company
1305 Grandview Drive
South San Francisco, CA 94080
(415) 871-1944

COPY DEADLINE

In order to meet our publication dates, we have established the fol- lowing as the last possible date, that copy for the FOG DISPENSER can be in the editor's hands:

Meeting date Copy deadline

May 12, 1978 Apr. 14, 1978
Jun. 1, 1978 May 12, 1978

Published Monthly, October through June, by the Golden Gate Chapter of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, c/o Duplicating Associ- ates, 370 Brannan Street, San Fran- cisco, CA 94107—Phone 495-4552

1977-1978 OFFICERS

Eugene L. Valerio President
Dick M. Glumac Vice-President
Thomas A. Gilbertson Secretary
James M. Holden Treasurer

BOARD OF GOVERNORS

Robert Phillips Tom Campbell
Carl Jordan

...minutes continued...

or from one of the local drug stores for approxi- mately \$2.00 is a deter- rent to those would-be muggers. Murphy suggested not to carry it in your purse because that is the first thing to be taken.

h. The State of Oregon has recently required mandatory sentencing of 10 years without possibility of parole for burglary and 15 years without possibili- ty of parole for robbery and this seems to have had

a real effect in deterring those would-be criminals.

8. Murphy received an ovation for his excellent reporting and efforts in crime prevention and his advice from the group.

9. Meeting was adjourned.

Respectfully submitted,
Tom Gilbertson

TREASURER'S REPORT

	1-31-78	2-28-78
Income	\$12132.75	\$ 6870.60
Expenses	\$ 912.21	\$ 7215.44
Members Equity	\$17133.94	\$16788.80

CRC 78 TICKETS AVAILABLE AT REDUCED RATES

Tickets are now available for the five CRC 78 Social Events. Prior to April 15th the tickets will be sold at reduced rates as an incentive to local Chapter members and their "special others" to turn out en masse. The dates, prices and events are as follows:

<u>Date & Time</u>	<u>EVENTS</u>	<u>Before April 15th</u>	<u>April 15th & After</u>
May 11, 1978 9:00 am	Ladies DeYoung Museum Tour with bus service to and from the Hotel	\$ 6.00	\$ 7.00
May 11, 1978 12:00 noon	Welcome Luncheon at the Hyatt Regency	\$10.50	\$12.00
May 11, 1978 6:00 pm	An evening at Earthquake McGoon's with Turk Murphy's Jazz Band entertainment and dancing. Shuttle services from the Hotel.	\$11.50	\$13.00
May 12, 1978 10:00 am	Ladies Luncheon at the Alta Mira Hotel in Sausalito with a stop at the Palace of Fine Arts and time for shopping in Sausalito after lunch. Bus service included.	\$13.00	\$15.00
May 12, 1978 6:30/8:30 pm	Cocktails/Banquet - Dance to be held at the Hyatt Regency.	\$22.50	\$25.00

Lets show the rest of Region 10 that the social events we have planned are not only going to be fun for our visitors but fine enough that we the local chapter members want to attend also.

Tickets can be obtained from the following Committee members: Tom Gilbertson, Dick Porter, Bill Hagerman, Pete Tidmarsh, Chuck Tarnoff, Jerry VanBalen, Nick Dann, Jim Nemecheck, John Brose, Fred Farmer, Ward Clark, and Dick Friedman.

MINUTES FROM LAST MEETING

February 2, 1978

The annual father-mother-children field trip meeting was held at the Elegant Farmer at Jack London Square in Oakland on Thursday evening, February 2, 1978. A total of 94 members and guests attended and despite the bottle neck at the table for collection of the price of the dinner, everyone was seated before 7:00 p.m. Most people present were amazed at the portions of the old fashioned fried chicken or breaded veal cutlet that was served.

The business meeting was called to order at 7:30, following introduction of members and guests.

1. A motion was made and seconded for approval of the January 5 general meeting minutes. The motion was carried.
2. Spokesmen from the Scott Company who were guests of the Chapter for dinner and hosts for the tour of the Scott Company facilities following dinner, were introduced by Vice President Glumac.
3. Before leaving for the Scott Company, Dick Glumac delivered a short history of the company, one of California's largest mechanical contractors.
 - A. Company originally formed before the turn of the century.
 - B. Purchased by the Scott family in 1903.
 - C. From 1903 to 1960 operated by the Scott family as a limited partnership.
 - D. In 1960 formed as a corporation.
 - E. Corporation now operated by majority stockholders.
4. Dinner meeting adjourned and party split into four groups

- ...minutes continued...
 en route to the Scott Company headquarters and sheet metal shop at 1919 Market Street, Oakland.
5. Tour of the plan revealed an amazing amount of floor space with extra space available due to the recent removal of the pipe shop. The neatness of the shop, automated duct machine, orderly storage of equipment and materials, created no small amount of envy on the part of other contractors present.

6. After touring the sheet metal plant, the group visited the pipe shop facilities at 4300 East Shore Highway at Emeryville, which houses the pipe and plumbing shops. Some of the complicated pre-fabricated welded piping Scott Company specializes in was available for inspection. The large size of the shop, automatization, large inventory of material and available storage space was impressive to observe.
7. After touring the pipe shop, everybody went home.

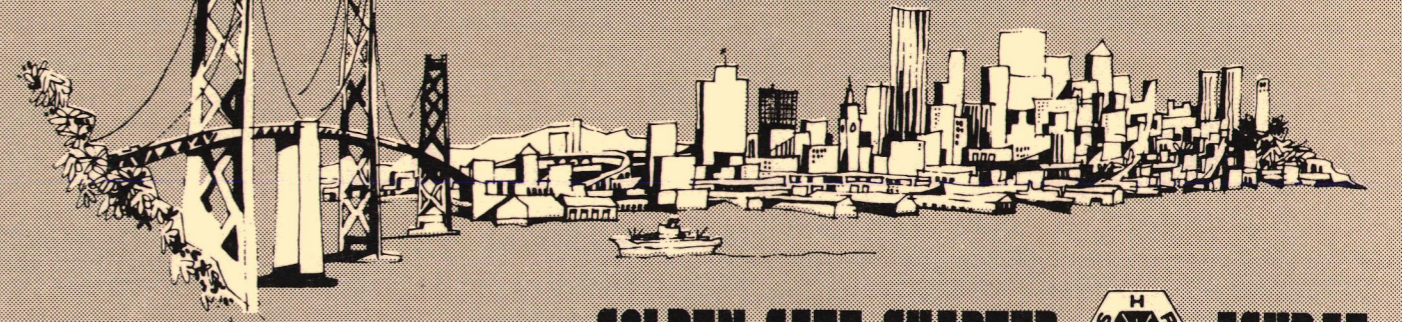
Respectfully Submitted,
Jim Holden, Treasurer

ECONOMIC DEFINITIONS

Capitalism: You have two cows. You sell one and buy a bull.
Socialism: You have two cows and give one to a neighbor.
Communism: You have two cows. The government takes both, and gives you some of the milk.
Totalitarianism: You have two cows. The government takes both and shoots you.
Great Societyism: You have two cows. The government takes both, shoots one, milks the other and throws the milk away.

FROM MANAGEMENT DIGEST
JULY, 1975

Fog Dispenser



GOLDEN GATE CHAPTER  **ASHRAE**

VOLUME XVII NO. 6

MARCH, 1978

MEETING NOTICE

The sixth meeting of the Golden Gate Chapter for the 1977-78 year will be held at the Engineer's Club on the 16th floor of the Hong Kong Bank Building, 160 Sansome Street, San Francisco, on Thursday, March 2, 1978. The Social Hour will begin at 5:30 P.M., with dinner at 6:30 P.M.

REMEMBER--THE MARCH MEETING IS LADIES' NIGHT--BRING YOUR WIFE.

NOTICE * NOTICE * NOTICE * NOTICE

There will be a raffle of the returned reservation cards! The one picked will receive a free dinner for the April meeting. Send in your reservation cards early.

MARCH PROGRAM

Chairman: Dick Glumac
 Subject: Building Construction in San Francisco
 Speaker: Diane Feinstein

Diane Feinstein, a member of the Board of Supervisors of San Francisco, will speak on a topic of general interest related to construction in the City of San Francisco, such as E.M.P.

PRE-MEETING WORKSHOP

Because the March meeting date is LADIES NIGHT, there will be no pre-meeting workshop. However, Tom Judson will have another fine program lined up for the April meeting.

HONOR ROLL

McLAUGHLIN ASSOCIATES

LIEBERT Computer Room AC Units, ALADDIN Air Handlers,
COMMAND-AIRE Water Source Heat Pumps

Chuck McLaughlin Jim Plakos Les Mielcaz

261 Hamilton Ave. #320 Palo Alto 94301
(415)326-9115

PRESIDENT'S COLUMN

The 90+ members and guests who toured the Scott Company shops last meeting couldn't help but be impressed with the size, flexibility and orderliness of the facilities. Thanks much to Scott's management and employees who arranged the event for us.

Gene McCabe, our diligent Research Promotion Committee Chairman, attended a Regional Meeting in San Francisco a few weeks ago. This was the official opening of ASHRAE's National Research Fund Drive. Although the Chapter makes an annual donation from the General Fund, we will be encouraging individuals and firms (including branch offices of national companies) to contribute. Consulting engineers in particular will be asked to donate.

Oh, yes, we went to the Atlanta meeting and show. More than enough partying, conversation and walking, but bottom line reads GREAT! We are truly in a tremendously alive (and changing) industry.

Gene Valerio

DATES TO REMEMBER

March 2-----Wives' Nite Meeting
 April 6-----General Meeting
 May 10-13----CRC 78

ANNUAL REPORT

The 1977 Annual Report of the Society is an excellent summary of ASHRAE activities. While it is no longer distributed to everyone, individual members may receive a copy by writing to Mr. Andrew T. Boggs at ASHRAE Headquarters, 345 East 47th Street, New York, NY 10017.

NOMINATING COMMITTEE REPORT

In accordance with Chapter By-Laws, Article VII, the Nominating Committee hereby submits to the membership the following list of nominees for Chapter offices for Fiscal Year 1978-79:

President.....Dick M. Glumac
 Vice-Pres.....Thomas A. Gilbertson
 Secretary.....James M. Holden
 Treasurer.....Robert W. Phillips
 Board Member
 (2 yr. term)..James G. Taylor
 Past-Pres.....Eugene L. Valerio

Note that Thomas Campbell, who was elected to the Board last year for a two-year term, will continue to serve for Fiscal Year 1978-79.

Additional nominations of members in good standing consenting orally or in writing to be candidates may be made from the floor at the March General Meeting. Ballots will be mailed in March for the election to be held at the April meeting.

---Lewis S. Pollock, Chairman

COPY DEADLINE

In order to meet our publication dates, we have established the following as the last possible date, that copy for the FOG DISPENSER can be in the editor's hands:

Meeting date Copy deadline

Apr. 6, 1978 Mar. 17, 1978
 May 12, 1978 Apr. 14, 1978
 Jun. 1, 1978 May 12, 1978

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—Phone 495-4552

1977-1978 OFFICERS

Eugene L. Valerio..... President
 Dick M. Glumac.... Vice-President
 Thomas A. Gilbertson... Secretary
 James M. Holden Treasurer

BOARD OF GOVERNORS

Robert Phillips Tom Campbell
 Carl Jordan

Know a Prospective New Member?

Contact Membership Chairman:
 Jim Nemechek (415) 871-6808
 or Committee Members

Dick Frenzel (415) 873-1660

Mail or Phone News to:
 Bill Schultz, Editor
 FOG DISPENSER
 Powers Regulator Company
 1305 Grandview Drive
 South San Francisco, CA 94080
 (415) 871-1944

ASHRAE PUBLICATIONS ?

Jim Nemechek offers the following answers to common questions regarding publications.

1) Q: When does the Journal start?
 A: The month a new member is elected to membership.

2) Q: When is the first data book sent to a new member?

A: The fiscal year runs from July 1 to June 31. New members get the book published the fiscal year they are elected if they pay their dues; e.g., a member elected between 7/1/77 and 6/31/78 will get the 1978 data book.

3) Q: Is the data book sent only if a full year's dues are paid?

A: Any new member gets the book regardless of the amount of dues he paid.

4) Q: How can a complete set of data books be obtained?

A: A brand new member can order one copy of any data book at half price. Old members pay full price for any data book other than the ones received as part of their membership.

5) Q: How can I order ASHRAE publications?

A: Order from:

ASHRAE Publication Sales Dept.
 345 East 47th Street
 New York, NY 10017

TECHNICAL SEMINAR

Our 1978 Technical Development Seminar was an outstanding success, with 480 registrants eager to learn the intricacies of Title 24. The Chapter is grateful to all who participated in its presentation and to those who attended.

Remember--the March meeting is Ladies' Night--bring your wife.

NEW MEMBERS

The Golden Gate Chapter welcomes the following new members:

Joe Sheeley BART
 Bob Frazier Lawrence Liv. Labs
 Steve Kwan Glumac & Assoc.
 Carl Hiller
 Brandt Anderson

TREASURER'S REPORT

	<u>12-31-77</u>	<u>1-31-78</u>
Income	\$1989.65	\$12132.75
Expenses	\$1402.71	\$ 912.21
Members Equity	\$5853.28	\$17133.94

INDUSTRY NOTES

The honored SIMPSON, STRATTA & ASSOCIATES name has been replaced with RASMUSSEN-INGLE-ANDERSON, continuing the business at the same San Francisco location. JOHN CARRIGER has been appointed Chief Mechanical Engineer, while DON McLEOD remains as a consultant to the department.

DICK FRENZEL of EDWARD B. WARD & CO. is showing new assistant DENNIS HAMMOND how it's done, now that former assistant ROD KAIDA has been promoted to Field Sales.

Welcome to the new CARRIER District Sales Manager in Emeryville, TOM KOHL, who joins us from his previous assignment in Chicago.

Have you met those three attractive young women we see regularly at our meetings? They are JOYCE OWENS, sales engineer with CARRIER; SANDY SADOWSKI, sales representative with OWENS-CORNING FIBERGLASS; and GAY YAMAGIWA with the Commercial Sales Group at HONEYWELL.

KEN WILSON has returned to the HVAC design business and is now with RICH SCUDERO, consulting engineer in Santa Rosa.

SEMINAR MANUALS AVAILABLE

We have some complete Energy Conservation Design Manuals left over from the Technical Seminar. These are reprints of the State manual and include the Standards and latest amendments PLUS a new two-inch ring binder.

You'd pay nearly \$17.00 for this material; but while they last, we are offering them at a close-out price of \$10.00, including UPS charges.

Send your check (payable to ASHRAE) with your order to Duplicating Associates, 370 Brannan Street, San Francisco, CA 94107. First come, first served! Tell your friends who couldn't attend the seminar.

RECENT PUBLICATIONS

REFRIGERANT LINE SIZING (RP 185)

Provides easily used charts to determine refrigerant suction, discharge and liquid line sizing for R-12, R-22, R-502 and R-717. Information is practical for everyday use. Twenty-nine charts and 10 tables are included. Cost for ASHRAE members \$2.50 (add postage and handling: \$1.00).

REVISED METRIC GUIDE FOR HEATING, REFRIGERATING, VENTILATING AND AIR-CONDITIONING

In June 1975, ASHRAE adopted the International System of Units of Measurement (SI) and established a schedule for their introduction and use. This guide has been prepared to supplement the standard references on metric conversion, both for members and the industry as a whole. Included are listings of units and symbols, applications and conversion factors. Cost for ASHRAE members \$2.00, postage and handling included.

Send check with order to:

ASHRAE Publications
345 East 47th Street
New York, NY 10017

HELP! CRC HELP!

The following urgent message was received from Jack Palmer, chairman of the finance committee for CRC '78:

"So far 12 of our members have contributed \$315.00 towards our cocktail party for the CRC meeting in May. We need approximately \$1,500.00, so, please send in your contributions. Let's show the other chapters how hospitable the Golden Gate Chapter really is! Send your check to my attention, payable to:

"ASHRAE CRC '78"
Jack A. Palmer c/o
California Hydronics Corporation
350 Hatch Drive
Foster City, CA 94404

HOW TO KILL YOUR CHAPTER

1. Stay away from meetings.
2. If you do come, find fault.
3. Decline office or appointment to a committee.
4. Get sore if you aren't nominated or appointed.
5. After you are named, don't attend board or committee meetings.
6. If you do get one, despite your better judgement, clam up until it's over. Then sound off on how things really should be done.
7. Do not work if you can help it. When the Old Reliables pitch in, accuse them of being a clique.
8. Oppose all banquets, parties and shindigs as being a waste of the members' money.
9. Never accept a place at the head table.
10. If you aren't asked to sit there, threaten to resign because you are not appreciated.
11. Don't rush to pay your dues. let the directors sweat; after all, they wrote the budget.

HANDBOOK COMMITTEES

Did you ever wonder where the technical information in the ASHRAE HANDBOOKS came from? The answer is that ASHRAE members wrote the data over a period of many years.

Did we pay for the information? In most cases the answer is no. The data came as a service to the Society. Dedicated people interested in sharing of information... important information...the kind you need...and use...in the form you need...often used to make your living...and always the latest information...and most important... free.

Now the point of this article is not to ask for money, but to provide you with an insight into Society functions. Look at ASHRAE as a large information gathering machine. We gather the best technical information available in our field and publish it for your use in whatever way you desire to use it. We are an information and teaching society assimilating special technical data for wide use.

How does this work? Every member is entitled to serve on one of the T.C. or T.G. Committees. (T.C. means Technical Committee; and T.G. means Task Groups.) At the present we have 83 T.C. Committees and four T.G. Groups. The HANDBOOKS are broken up into chapters with a T.C. or a T.G. responsible for each chapter. These committees form sub-committees with responsible people who write and rewrite the technical information presented. Their data is reviewed by still other committees who oversee the material for its contents, uniformity and clarity.

You too can be a part of this vast information chain, and you should be. Your ideas and methods will be reviewed and if acceptable will be added to the HANDBOOKS for the use of others. It really is sim-

... continued...

ple...people helping people... sharing data and technical information...sharing freely.

Give it a try. Look through your HANDBOOKS, find a chapter of interest or one fitting your expertise and serve on a T.C. or T. G. Committee.

How? Simple. Just drop a note to ASHRAE, 345 East 47th Street, New York, NY 10017, Attention: Technical Committee Secretary, and ask to serve. A simple biographical form will be returned for you to fill out. Send it back and it will be forwarded to the Chairman of the Committee of your choosing. The Committees meet at the Annual and Semi-Annual ASHRAE meetings, however they also do a lot of correspondence business.

(Adapted from an article by Bob Wells of the Puget Sound Chapter)

MEETING GUESTS

Felton Peterson/Guttman-MacRitchie
 Philippe /Aladdin Htg.
 Jean Pierre /Aladdin Htg.
 Warren Tauble /Pacific Prince
 Bill Lohse /Pacific Telephone
 Jim Parsons /Pacific Telephone
 Dick Collins /Alta
 Jim Collins /Alta
 Critchfield /CMI
 Don Miller /CMI
 Maha Zarour /Johnson Service
 Mike Costello /Scott Co.
 Kordula Gardner/Alladin
 Brian Shaw /Charles & Braun
 Gayland Abernathy /Johns Manville
 Joyce Owen /Carrier
 Justin Rinefort
 Daniel Jordan
 Kurt Jordan
 Nancy McLoughlin
 Tom Judson IV
 Bill Judson
 Tom Kennedy
 Curtis Charles
 Mary Valerio
 Tina Valerio
 James Hill

SUGGESTIONS FOR DESIGN ENGINEERS (AND THEIR ARCHITECT CLIENTS)

Ray Wolford and Laurie Ingram are Chapter members operating Material Survey Associates, Inc., an invaluable takeoff service for suppliers and contractors. They look at hundreds of plans every year. A few years ago, Laurie presented a Pre-Meeting Workshop on preparing plans and specs for greater clarity. We recently found Laurie's outline of that talk, and asked him to update it. Here it is:

I. Original PlansA. Schedules

1. Put all equipment schedules in one area. Do not schedule a piece of equipment and then schedule it again on the floor plan.
2. Include all accessory information in schedule; e.g., filters, vibration isolators, starters, etc.
3. Symbol each piece of equipment even if it is a part of a system.
 - a. Use symbol only once on a project.
 - b. If more than one building, incorporate building number in symbol; e.g., EF-1A (EF-Exhaust fan, 1-fan number, A-building) and explain symbol notations.
 - c. If plan has identical pieces of equipment, use different symbol number for each one.
 - d. Use symbol instead of telling where or how equipment is to be used; e.g., use SF-1 instead of "Perimeter Supply".

B. Drawings

1. Floor plans and elevations.
 - a. Symbolize equipment on both floor plans and elevations.
 - b. Put room numbers on mechanical floor plans.
 - c. Alternates should be indicated on the drawings.
2. Details
 - a. Reference equipment to which the detail applies.
 - b. Indicate accessories required; e.g., vibration isolators, filters, flexible connections, etc.
 - c. Group details all in one area of the plans.

II. Original Specifications

- A. All information pertaining to mechanical equipment should be in mechanical section; e.g., starters, motors, painting, controls, spare filters, maintenance contracts, etc.
- B. If there are many different pieces of similar equipment, cross reference equipment symbols to proper specification paragraph.

III. Rebids

- A. Indicate changes in specifications by addenda or notations on the specification pages that have changed. Use a symbol indicating addendum number. If no changes, indicate that there are no changes by printing "No changes on this page".
- B. Indicate changes on plans.
 1. Circle changes.
 2. Use symbol showing where changes are made, and the addendum number.
 3. Indicate if plans are new.
 4. If no changes, indicate no changes.

IV. Addenda and Bid Date Changes.

- A. Issue no later than five (5) days prior to bid date.
- B. State specifically the section of specification and equipment symbols that the addendum affects.
- C. Make sure all plan holders receive all addenda.



Fog Dispenser

GOLDEN GATE CHAPTER



ASHRAE

VOLUME XVII NO. 5

FEBRUARY, 1978

MEETING NOTICE

The fifth meeting of the Golden Gate Chapter for the 1977-78 year will be the annual fieldtrip which will be a tour of Scott Company of California facilities located in Oakland. Fathers, Mothers, and Children are invited to join the group which will start with cocktails and dinner at Jack London Square. The social hour will begin at 5:30, dinner at 6:30, and the tour will be from 7:30 to 8:45. For detailed information, see the enclosed flyer.

FUNDAMENTALS HANDBOOK

Yes, there is a Handbook of Fundamentals! Another call to New York City on January 9, advised us that the printer started mailing them on December 5, 1977 on a piecemeal basis. Some members in the East have received their copies. Please be patient, members!

ATTENTION * ATTENTION * ATTENTION
Call Dick Glumac (398-7667) before January 30 to make reservations for annual field trip. See enclosed flyer.

TEMPERATURE DATA BOOKS

California Title 24 Energy Regulations reference our Chapter's "Recommended Design Temperatures-Northern California." The 1965 data has been reprinted as the Third Edition, November, 1977.

To obtain a copy, send a check for \$3.00 (includes postage) payable to "ASHRAE GOLDEN GATE CHAPTER" to:

ASHRAE %Duplicating Associates
370 Brannan Street
San Francisco, CA 94107

HONOR ROLL

AHK

Commercial and Industrial HVAC Equipment Supplier
RUSKIN AMERICAN S.F. FLAKT BAHSON CARGO CAIRE

Ed Akizuki Don Huffine Mike Cadoo

480 Littlefield Avenue South San Francisco 94080
(415) 873-1330

PRESIDENT'S COLUMN

Thank you, Dave Waterworth, for a Roster well done - and to Jim Nemechek, whose name was dropped out of last month's column by the printer.

As some of you know, our Chapter has been a regular contributor of the ASHRAE-Donald C. Bryant Scholarship Fund at City College of San Francisco. Monies are drawn from the fund twice yearly and given to deserving students in the Air Conditioning Technology course. Interested students apply for these scholarship funds, which are disbursed by the City College Foundation upon recommendation of a Faculty Review Committee.

It was my great pleasure recently to be invited to City College by Roy Anderson to address a student conclave and personally hand scholarship checks to the honored students. We distributed a total of \$285 to five students: Calvin Chui, Cory Lee, Thomas Lew, Joseph Lo, and Robert Wright. I was happy to have had this opportunity.

I'm looking forward to our Field Trip to Scott Company, thanks to Bernie Beckius and our many Scott Company supporters. See you there!

Gene Valerio

DATES TO REMEMBER

- Jan. 29-----Atlanta Meeting
- Jan. 31-----Tech Seminar 2
- Feb. 2-----Field Trip Meeting
- Feb. 7-----Tech Seminar 3
- Feb. 14-----Tech Seminar 4
- Mar. 2-----Wives Nite Meeting
- May 10-13----CRC 78

INDUSTRY NOTES

SYSKA & HENNESSY and G.L. GENDLER & ASSOCIATES have merged. GUS GENDLER remains in charge of the San Francisco office, operating as SYSKA & HENNESSY at the same location

RANDY KAUFFMAN has joined with PETE TIDMARSH to provide increased sales coverage for YORK PACKAGED EQUIPMENT in the Bay Area

Congratulations WANDA MCKINLEY (Wanda Berry) on your recent marriage! Wanda is with A.O.Reed in Burlingame.

Welcome back, GARY TREAT! We've missed your pleasant TRANE personality in San Francisco.

BOB SMITH is being proudly introduced as the new engineer at NORMAN S. WRIGHT EQUIPMENT CO. by JACK KNIVETON.

JEFF HUGHES recently joined JOE SCHAUF to help him move more BALTIMORE AIRCOIL equipment.

It's now officially GUTTMAN and Mac RITCHIE (formerly Kasin, Guttman and Associates) Best wishes to KARL, NORMAN, and to JERRY KASIN, who is in private practice in Berkeley.

Know a Prospective New Member?

Contact Membership Chairman:
Jim Nemechek (415) 871-6808
or Committee Member

Dick Frenzel (415) 873-1660

Mail or Phone News to:
Bill Schultz, Editor
FOG DISPENSER
Powers Regulator Company
1305 Grandview Drive
South San Francisco, CA 94080
(415) 871-1944

COPY DEADLINE

In order to meet our publication dates, we have established the following as the last possible date, that copy for the FOG DISPENSER can be in the editor's hands:

Meeting date Copy deadline

- Mar. 2, 1978 Feb. 10, 1978
- Apr. 6, 1978 Mar. 17, 1978
- May 12, 1978 Apr. 14, 1978
- Jun. 1, 1978 May 12, 1978

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 - Phone 495-4552

1977-1978 OFFICERS

Eugene L. Valerio..... President
Dick M. Giumac.... Vice-President
Thomas A. Gilbertson... Secretary
James M. Holden Treasurer

BOARD OF GOVERNORS

Robert Phillips Tom Campbell
Carl Jordan

...minutes continued...

than that behind locked doors, i.e. not generally accessible to the public. He felt that product development was delayed particularly as a result of problems with sub-suppliers and anticipating component availability. Mr. Werner suggests reducing the safety standards.

- I. A question and answer session followed.
- Q. Why doesn't the San Francisco Code recognize CSA and the Los Angeles Code?
- A. LA serves LA, and lists and delists and does not provide service in the San Francisco area. CSA meets a Canadian Code, and present listing and follow up service does not include field inspection, i.e. it is not as stringent as Underwriters Laboratory.
- Q. Can products be inspected in the field by UL?
- A. Field inspection can occur so the Underwriters Laboratory label can be applied if a standard for that equipment and a manufacturing standard exists. Otherwise, no. Approval for safety considerations in the field is difficult because tests cannot be run as they would be in the laboratory. UL labels may not be applied indiscriminately as a result of any field inspection, again if standards did not exist.
- Q. Could the report of a licensed mechanical engineer be acceptable in San Francisco as to approval for safety?
- A. Possibly yes, in the future. As the present standard exists and is enforced now, the answer is no.
- Q. What delays have been encountered as a result of no UL labels?
- A. If equipment has been submitted to Underwriters Laboratory for approval, it is possible to have this inspected in the field and "upgraded"

...minutes continued...

to the standard established. This recently is happening with chillers which have been submitted but the UL safety standard has required changes in the quality of their construction to bring them up. These changes are made in the field later on at the manufacturer's expense.

- Q. As an alternate to UL labeling, would the City of San Francisco accept certification by a professional engineer certifying as to safety?
- A. Probably no.
- Q. Why does UL have motors up to 5 HP labeled as being UL?
- A. The motors that are labeled are the "explosion proof" type meeting the classifications of Class 1, Group D. Motor location effects motor performance, hence, except in the case of explosion proof motors, they are not listed.
- Q. Would the City of San Francisco accept State Fire Marshall listing in lieu of UL?
- A. No. Again, because no follow up inspection is available.
- Q. What can Protection Engineering Co. provide?
- A. The Board of Examiners made the decision to allow Protection Engineering and Electro Test to approve and inspect custom electrical equipment.
- Q. Does the application of the product as an engineered vs. an applied product or its location behind locked doors effect the requirement for UL?
- A. No. The issue of access is a "somewhat phony issue." It is certainly true that we owe the janitor and operating engineer a full measure of safety.
- Q. What about retrofit and repair of UL products? Does this alter their UL approval?
- A. UL only applies to the product as it leaves the factory. Retrofit might require third party field inspection.

Meeting was adjourned.

ESCMT HONORS DESIGNERS

Twenty two architects and engineers who helped open the design fields to minorities were paid tribute on December 17, 1977, as the ESCMT (Engineering Societies' Committee for Manpower Training) celebrated its tenth anniversary.

Held at the Marines' Memorial Club in San Francisco, the ceremony honored the founders and builders of the ESCMT, a non-profit organization which has received national acclaim for enabling capable, but less fortunate people to advance in architecture and engineering. ESCMT President, Don Poindexter and Executive Director, Howard Rideaux presented awards to the following people:

FOUNDERS - Jack McMinn; Hans Feibusch; Sol Cooper; Robert F. Preece; Robert T. Lawson; Thomas D. Wosser; William R. Schmidt; Daniel Shapiro; Tom Gwyn; David Orzech; Henry Shubart; Fred Jordan; Neil Warren; Wiley Pierce; Richard B. Gould; Howard A. Schirmer; James D. Leach; William W. Giles, Jr.; Harold A. Davis.

BUILDERS- Karl Guttman; Pete Bank; Norman MacRitchie.

One hundred seventy five people joined to celebrate the organizations birthday. The ESCMT has developed an impressive reputation partially because of its top quality on-the-job (OJT) Training program, which places able young people in Bay Area architectural and engineering firms for 42 weeks of professional training.

TEACHER NEEDED

ESCMT needs one or two part-time teachers for its expanding Math and Drafting classes. These classes are an integral part of the ESCMT on-the-job training program for draftsmen. If you are interested in filling this position please call Howard Rideaux at 543-3383 for full details regarding time, salary, and required background.

TREASURER'S REPORT

	<u>11-30-77</u>	<u>12-31-77</u>
Income	\$ 684.00	\$1989.65
Expenses	\$ 537.28	\$1402.71
Members Equity	\$5269.34	\$5853.28

MEETING GUESTS

Joe Brooks	Underwriters Labs
Robert Levy	City of San Francisco
Enrique Mercurio	Glumac & Assoc.
Dick Viviani	Honeywell
Felton Peterson	Guttman, MacRitchie
Randy Kauffman	York
Paul Cockrell	Brown & Caldwell
Robert Smith	Norman S. Wright
Bob Dutton	University Mech
Bill Lieber	University Mech
Glen Umont	Carrier
Joyce Owen	Carrier
Tom Kohl	Carrier
Ed Schommer	Carrier
Dale Yager	The Brose Company
Ron Swaving	Gambel Instrument

MINUTES FROM LAST MEETING

Meeting was called to order at 7:37 pm for January in the Engineers' Club, San Francisco, CA, by President Valerio.

1. A motion was made & seconded for approval of the December 1st general meeting minutes. Motion was carried.
 2. President Valerio thanked Dr. George Wilson for conducting the workshop this evening on acoustics.
 3. Rosters have been received by most members at this time.
 4. As of this writing, no one has received the national publication, "Book of Fundamentals."
 5. President Valerio asks for approval of the five member nominating committee. Motion was made and seconded for approval. Motion was carried.
 6. Tom White reports the CRC 78 arrangements are in readiness, including golf, Earthquake Magoons visit, and the banquet which will double as the Golden Gate Chapter's social in May. Registration is to be limited to 500 persons at all technical
- continued next page...

...minutes continued... sessions of our annual seminar on Title 24.

7. Technical Seminar begins January 24, 1978. Over 200 people have sent in their registration.
8. Vice President Glumac, the program chairman, introduced the members of our panel discussion which took up the matter of Underwriters Laboratory listing. Members of the panel were Dart Rinefort, Vice President of Glumac & Assoc.; Lu Bedard, Vice President of Dinwiddie Construction; Robert Levy, Superintendent of the Bureau of Building Inspection, Department of Public Works, City and County of San Francisco; Joh Werner, Mirov-Trane Co.; and Mr. Joe Brooks, Underwriters Laboratory.
 - A. The ASHRAE Chapter was instrumental in forming an ad hoc committee that would seek to bring about clarifications in requirements in UL Listings in the City and County of San Francisco. Dart Rinefort is the ASHRAE Chapter's representative to this committee which was formed as a result of the January 24, 1977 hearing before the Board of Permit Appeals.
 - B. The Committee consists of members from all involved groups, electrical contractors, manufacturers, contractors, owners, the ASHRAE Chapter and other.
 - C. Rinefort reported that the issue is indeed a very complex one requiring a most profound examination--clearly not a simple issue, particularly since safety standards in the public's health and welfare is concerned. Rinefort reported that no conclusions have been reached yet and that the Board had met several times and had additional meetings scheduled. Life and safety of individuals are involved here, with shock and fire hazards addition prime considerations.
 - D. Robert Levy reports that a standard for safety is what is involved. The City Code requires

...minutes continued... that virtually every device have a standard of safety, and that a labeling service. The requirements apply to any device that has over 30 volts electrical power and/or over 50 volt amps of consumption.

- E. The five meetings of the task force to review the UL requirements have been held. The sixth is scheduled for January, and it is hoped that the committee will be instrumental in helping draw guidelines to have the committee review and use this guide for the forthcoming electrical code revisions.
- F. Mr. Joe Brooks told us that Underwriters Laboratory is 83 years old and is chartered as a "not for profit" laboratory that provides testing for public safety, consists of 6 departments of which the electrical is the largest. UL has five testing stations and over 360 standards. New standards are developed as they are required. The standards are developed as they are required. The standards are then reviewed revised and adopted and an effective date is set for their enforcement. Manufacturing inspection is performed to insure compliance. Demand for compliance of Underwriters Laboratory's listing is by local authority, not by UL.
- G. Lu Bedard of Dinwiddie Construction, is the AGC representative of the panel and re-affirmed that this is indeed a complex problem. Mr. Bedard pointed out that the consulting engineer can and should be appraised of which equipment has Underwriters laboratory labels. He mentioned his concern for orderly job progress and the need to keep costs in line on construction and re-affirmed his concern for the safety of those involved.
- H. John Werner, Mirov-Trane, felt that perhaps if equipment was accessible to the public, it should be treated differently

NEWS FROM HEADQUARTERS

Wanted: Engineers

The index of demand for scientists and engineers has shown good recent strength. Beginning last May it stayed above 100 through 1976, revising a trend that had it below 100 for 19 months. The scale reflects employment rates derived from help-wanted ads in selected trade publications, using 1961 figures as the benchmark. The level for December was 115, compared with 68.8 for December 1975 and 80.1 for December 1974. Yearly averages show: 101.7 in 1976, 74.4 in 1975 and 90.5 in 1974.

Young Members

The Young Members in ASHRAE Committee was recently organized as an official subcommittee of the Board of Directors and charged with the task of encouraging the increased participation of the younger ASHRAE members in the activities of the Society. It is felt that both ASHRAE and younger members will benefit greatly if this objective can be accomplished. While we realize that the initiative for this participation must come from the younger members themselves, we also believe there is much that ASHRAE can do to help. The purpose of this letter is to encourage you to consider the younger ASHRAE members when formulating your local chapter's plans. This could include the appointment of younger members to committees, possibly dedicating a meeting each year to the younger members, or simply encouraging your established members to make an effort to welcome younger members at your meetings. We feel that your consideration of actions such as these will greatly help in getting young members more interested in our organization. Meanwhile, the Young Members in ASHRAE Committee will be working

...headquarters continued... toward encouraging participation at the national level. Hopefully, one of the results of this effort will be a provision for including a measure of young member participation in local chapter activities in the Presidential award of excellence system. We are also trying to increase the number of young people on Technical Committees and Task Groups. By combining our efforts at the national and local level, we hope this is going to better ASHRAE while at the same time encouraging the professional development of our younger members.

ASHRAE MEETS IN HALIFAX

Over 1200 people attended the Society's Annual Meeting in Halifax, Nova Scotia, June 26-30, participating in a technical program which consisted of twenty-eight sessions and enjoying the hospitality of the host chapter and a visit to a rather unique vacation area. This meeting was the second largest summer meeting in terms of registration. Totals showed 787 members, 126 nonmembers and 301 wives.

ASHRAE Insurance Plans

All inquiries about the Life Insurance Plan or any of the other Plans in the Group Insurance Program should be made to the Administrator, 1707 L Street, N.W., Washington, D.C. 20036. Telephone (202) 296-8030

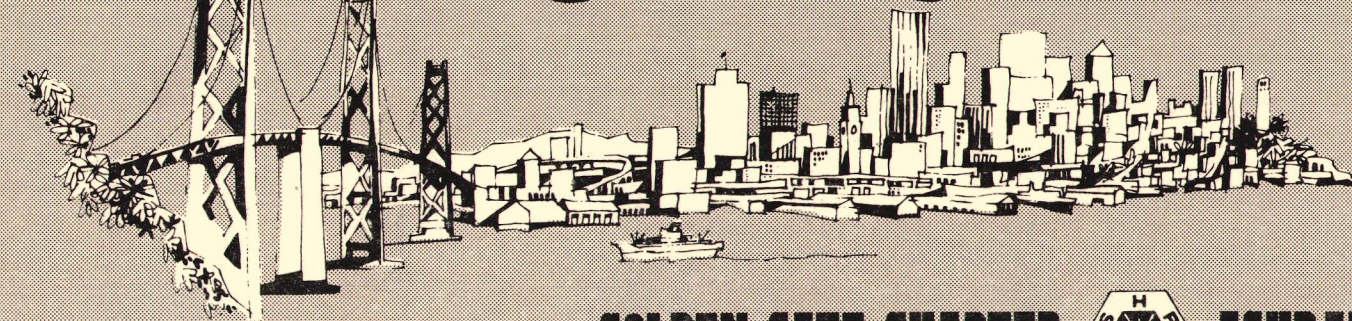
NOTICE * NOTICE * NOTICE * NOTICE *
 There will be a raffle of the returned reservation cards! The one picked will receive a free dinner for the January meeting. Send in your reservation cards early.

RECEIVED

DEC 28 1977

F.D. FILE

Fog Dispenser



GOLDEN GATE CHAPTER



ASHRAE

VOLUME XVII NO. 4

JANUARY, 1978

MEETING NOTICE

The fourth meeting of the Golden Gate Chapter for the 1977-78 year will be held at the Engineer's Club on the 16th floor of the Hong Kong Bank Building, 160 Sansome Street, San Francisco on Thursday, January 5, 1977. The Social Hour will begin at 5:30 PM, with dinner at 6:30 PM.

PRE-MEETING WORKSHOP

Chairman: Tom Judson 6:00-6:30
Upstairs

Topic: Practical Aspects of H.V.A.C
Sound and Vibration Control

Speaker: Dr. George Wilson, Wilson Ihrig. & Associates,
Oakland, California

Dr. Wilson's presentation will emphasize the necessary interface between the mechanical, structural, and architectural consultants to achieve cost effective H.V.A.C. sound and vibration control.

JANUARY PROGRAM

Chairman: Dick Glumac

Subject: City & County of San Francisco Electrical Code Requirements for the U.L. Labeling.

Panelist: Robert Levy-City & County of San Francisco D.P.W. of Bureau of Building Inspection.
John Werner-Trane Co.
Lou Bedard-Dinwiddie Construction Co.
Moderator: W. Dart Rinefort, P.E. Glumac & Associates

The program will consist of pro and con discussion on this very controversial subject. All of the above are the members of a special "U.L. Task Force" set up by Robert Levy to arrive at a solution to the question of U.L. Labeling of various equipment used in our industry.

HONOR ROLL

AEROFIN CORPORATION

HEATING AND COOLING COILS

E.G. WEED, District Manager

564 Market St. San Francisco (415) 982-4876

PRESIDENT'S COLUMN

Recognition is due certain committees who have been very active the past few months.

The Seminar Committee (Jim Taylor, Co. Chairman) assisted by the Energy Conservation Committee (Kevin Dowling Chairman) with the help of eminent speakers has put together a program which might well be a sell-out. You have the announcement flyer- reserve now to be assured of admittance.

The CRC78 Committee (Tom White, Chairman) has finalized their planning-believe it or not. Their first announcement flyer is included with this issue. The Board is amazed and delighted (and relieved!) with their progress.

The Roster Committeeman, Dave Waterworth, and the Membership Committee Chairman, Jim callaborated on the review of roster names, a big job in itself, and the Roster is at the printers for typesetting and printing. We may even see it before the next meeting.

Dart Rinefort's UL Task Force Code Subcommittee has spent hours and hours on research and meetings. You'll hear about their activities at our January General Meeting.

You'll receive this after Christmas, but hopefully just in time to wish all of you the best of health, happiness, and prosperity in 1978.

Gene Valerio

JACK SPROTT

We regret to announce Jack's sudden passing on, August 4, 1977 of a heart attack. Jack was employed by the Ray Burner Co. in San Francisco for 40 years, most recently as a Sale Engineer. He was a Life Member of the Society and a Chapter Member.

Jack is survived by his wife, Maragaret, at the family home, 100 Font Blvd. Apt. 6, San Francisco 94132.

RETIRED MEMBERS

Society members no longer professionally active may elect retired status upon application to Headquarters, Annual dues are substantially reduced, but Handbooks are not distributed to retirees.

Your Chapter Board recently voted to extend gratis chapter membership to bona-fide Society retired members.

FUNDAMENTALS HANDBOOK

Mailing of the long-overdue Handbook of Fundamentals started on December 5, 1977, according to a Society Headquarters spokesman, who provided this information in response to a telephone call we palced to New York City on December 13.

Know a Prospective New Member?

Contact Membership Chairman:
Jim Nemechek (415) 871-6808

or Committee Members:
Sherman Brown (415) 568-2850
Dick Frenzel (415) 873-1660

Mail or Phone News to:
Bill Schultz, Editor
FOG DISPENSER
Powers Regulator Company
1305 Grandview Drive
South San Francisco, CA 94080
(415) 871-1944

COPY DEADLINE

In order to meet our publication dates, we have established the following as the last possible date, that copy for the FOG DISPENSER can be in the editor's hands:

Meeting date	Copy deadline
Feb. 2, 1978	Jan. 13, 1978
Mar. 2, 1978	Feb. 10, 1978
Apr. 6, 1978	Mar. 17, 1978
May 12, 1978	Apr. 14, 1978
Jun. 1, 1978	May 12, 1978

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 - Phone 495-4552

1977-1978 OFFICERS

Eugene L. Valerio..... President
Dick M. Glumac.... Vice-President
Thomas A. Gilbertson... Secretary
James M. Holden Treasurer

BOARD OF GOVERNORS

Robert Phillips Tom Campbell
 Carl Jordan

...minutes continued...

- earth cover over the top of the tank not only provides excellent insulation, but is suitable to hold a two- and three-story light construction building. To take as much advantage as possible of the storage capability, the system is designed for a 15 delta T between entering and leaving water in the using buildings. The design of the tank is approaching the maximum density of water which occurs at 4 C, hence the water being the coldest tends to remain on the bottom of the tank.
- G. It is important to remember that this is an open system and the system pressure is lost as water is "dumped" into the tank after the heat has been extracted from it. G.M. & T.R. Simonson considered the use of turbines and using a pump on each end of the motor shaft to recover the energy that is lost as the pressure is released to the tank. Since the system is a variable flow system, the economics did not indicate that it was worthwhile to attempt to recover the energy.
- H. The cold water is placed in the tank through a diffusion pipe network which is partially covered with 2" crushed rock. The top of the tank has yet another piping network to either return of draw off the warmer water. Mr. Simonson point out that it was extremely important to considered the flow conditions in everly element of the system.

A question and answer period followed.

- Q. What part of the load is "lost" through heat transfer through the tank?
- A. Approximately 200 tons at the maximum rate. However, this energy is partially recovered.
- Q. What is the basis of the piping design in the flow network?

...minutes continued...

- A. Roughly, the orifices in the pipe provide the diffusing network must have considerably greater resistance than the flow through the pip itself; approximately 3 to 4' per second through the holes.
- Q. Does this stored water have other uses?
- A. Yes, the tank provides emergency potable water for the Stanford University Hospitals plus the meergency fire fighting water for the campus. Extremely useful.
- Q. Do you consider a computer design for the piping system?
- A. Well, we used our fire sprinler piping program.
- Call for adjournment was made with the note that the next meeting would be the 5th of January, 1978, at the Engineers Club.

Respectfully Submitted,
Tom Gilbertson, Secretary

INDUSTRY NOTES

Glen Cheek of York welcomes the assistance of two recent arrivals in his office, DICK BENNINGTON and DAVE BRODKMAN.

Bill McClellan of PIPE SHIELDS has sent a long-time employee PETER VALERIO out into the wilds of the plan and spec market.

SAM YAMOTO has opened his private consulting practice in Oakland.

ED SCHOMMER and GLEN UMONT have joined the CARRIER office in Emeryville.

HESS GREINER and POLLAND now represents the WESTINGHOUSE line (7 1/2 tons up) in California.

MAX WOLFF is now estimating for DELUCCHI SHEET MERAL in San Francisco.

TEMPERATURE DATA BOOKS

California Title 24 Energy Regulations reference our Chapter's "Recommended Design Temperatures-Norther California." The 1965 data has been reprinted as the Third Edition, November, 1977.

To obtain a copy, send a check for \$3.00 (includes postage) payable to "ASHRAE GOLDEN GATE CHAPTER" to:

ASHRAE %Duplicating Associates
370 Brannon Street
San Francisco, CA 94107

TREASURER'S REPORT

	10-31-77	11-30-77
Income	\$ 789.00	\$ 684.00
Expenses	\$ 646.79	\$ 537.28
Members Equity	\$5064.24	\$5269.34

MEETING GUESTS

John Coppini	G.J. Yamas Co.
Dan Morrow	S. O. & M.
Mr. Sjoberg	J. L. Myers Co.
Bob Shuman	Trane Co.
W. Linder	Bechtel Corp.
Joe Parisi	Kasin & Guttman
John Cocclti	Fairfield Heating
Tim Hollman	PACO
Ronald Swaving	Gamble Instrument
Zivorao Zivanovic	Kaiser Engineers
David Brockmon	York
Dirk Van Ulden	PG & E
Richard Mayer	PG & E
F.H. Armstong	PG & E

NEW MEMBERS

Our Membership Drive continues year-around, but January is the time you should remind your friends who are not members that bargin dues-rates now apply. National memberships are pro-rated to half the yearly dues, and Chapter memberships (new members only, please) drop to \$9.00 for the balance of the fiscal year.

NOMINATING COMMITTEE

Our By-Laws specify that a Nominating Committee of five shall be elected at the regular January meeting each year. This Committee shall select candidates for Chapter offices and the Board of Governors for the Fiscal Year 1978-1979.

Your Board has nominated the following members of the Nominating Committee, and you will be asked for additional nominations and election of a complete Committee. The members to be put forward are:

- Irving Alger
- Dick Charles
- Charlie Haredman
- Lew Pollock
- Dart Rinefort

DATES TO REMEMBER

January 24	Tech Seminar 1
January 29	Atlanta Meeting
January 31	Tech Seminar 2
February 2	Field Trip Meeting
February 7	Tech Seminar 3
February 14	Tech Seminar 4



PLEASE
MAKE
CHECKS
PAYABLE
TO:
ASHRAE
Research

MINUTES FROM LAST MEETING

December 1, 1977

President Valerio opened the General Meeting at the Engineers Club Thursday evening, December 1, 1977. A motion was made and seconded to approve the minutes as published in the December Fog Dispenser. The motion was carried.

President Valerio thanked Al Hood of Peabody-Gordon Piatt for conducting the workshop on burners.

Dave Waterworth reported that the 1978 Roster was going to press and should be in our hands approximately the 15th of January.

Dave Attard and Kevin Dowling were recognized for their work on the 1978 Technical Seminar which begins January 24, 1978. (Apparently, the first of February 1978 is now the earliest possible date for consideration of Title 24 requirements in buildings.)

Vice President and Program Chairman, Dick Glumac, introduced Tom Simonson, F. an ASHRAE fellow, former president of the San Francisco Chapter, and in charge of the firm of G.M. & T.R. Simonson. Mr. Simonson, a PhD in physical chemistry from the University of California, presented the topic "Thermal Storage in HVAC Design."

- A. Thermal Storage actually does not do much for energy conservation.
- B. Early uses of thermal storage, which are quite common when you begin to think about it, was the pullman ice car refrigeration system and the standard hot water storage heaters. Storage is defined as when the "rate of recovery is less than the actual instantaneous use rate."
- C. The "non-constant load" allows the storage condition to occur hence spreading the demand rate on equipment. This allows the equipment to be sized at something less than peak loads.
- D. Mr. Simonson pointed out that storage of heat is considerably easier and less expensive than the storage of electricity through the use of water or ice;

...minutes continued...

recalled early ice harvests as examples. Water is ideal, however, NaSO₄.10H₂O for example for heat storage is approximately ten times as efficient as water. The electric brick house furnace is presently being used as a heat storage application.

- E. Since the most popular medium for storing heat is water, it is important to understand that stratification within a tank can be made to work for you. If water can be placed in the tank very carefully, in an attempt to reduce mixing at the interface, diffusion is very slow and you have an excellent opportunity to maintain separation between the different temperature layers. The use of vertical tank with its smaller diffusion interface in the same size horizontal tank will be more efficient in separating the layers.
- F. Stanford University presented an opportunity to develop a storage system in lieu of adding considerable tonnage. The installed capacity was approximately 5000 tons and a 4000 ton addition was considered. Mr. Warren Weeks a member of the Stanford staff suggested the consideration of storage facility. Studies by G.M. & T.R. Simonson led to the development of the present storage system which is under construction and consists of a three million gallon storage tank, two 1000 ton electric machines that will "never" be run during the time when they could effect the demand peak are used to remove heat from the "tank". Additionally these machines were selected at approximately .57 KW per ton taking advantage of the lower leaving tower water and/or evening wet bulbs. The tank is an underground concrete chamber, 180 feet square at the top with 45 sloping slides to a depth of 25 feet. The