

substitutions, and frequently take advantage of an engineer's ignorance in the refinements of products. He stated that when it comes to substitutions today, the engineer has almost got to be a lawyer in order to be able to enforce his standards of quality on equipment.

He wondered where the vendors were who would consider approaching an architect, an engineer, or owner today offering them a better product for slightly more money, rather than the other way around which is now standard.

Contractors, too, have an influence in debasing the quality of a job. He particularly pointed out the practice of pleading mistakes in bidding (and raised a point as to whether this is not purposeful and a way of doing business). With so many projects having federal money involved and requirements of competitive specifications, there is always an equal to the equal no matter how poor. Within the scope of experience of his office, they have found that the quality of workmanship on the job depends upon the degree of supervision in the field. Using tubing of pneumatic control systems as an example, he pointed out his attitudes, opinions, and evaluations of copper versus plastic and their relative costs, both on an initial and an ultimate basis.

He felt that workmanship and attitudes of workmen also help to prevent quality. Sheet metal work seems to be the worst offender in the business with welding and insulation running close seconds. He felt that the degree of skill upon the part of workmen is sadly lacking today and mentioned that the waste of materials, loss of small tools, early quitting times, etc., were needlessly increasing costs of construction.

He felt, finally, that architects and engineers were perhaps the worst group. He briefly touched upon the attitude of architects who feel that consulting mechanical consultants are a sink hole for a lot of funds which they could better utilize elsewhere. Many architects have no interest in the mechanical systems, and some believe in either hiring no consultant or are quite satisfied with sub-standard consultants.

He felt that engineers all too often were far from the professionals they should be. That cut rate offers obviously meant that they could not do a good job for the client. Some are more interested in the fee they get than the service they give. His firm's experience indicated that they should give the service first and worry about the money afterward.

He felt many engineers just will not take time to evaluate products and if they did that there were many products that they would neither specify nor accept on their projects. He felt that some engineers in practice today do not know the difference in quality and pointed out that their ignorance could be attended to by field trips where they could actually see that which they are getting.

Many engineers create problems by not standing back of the specifications they write. Many engineers do not keep abreast of new developments in the field or new methods and he felt it entirely proper for an engineer to charge an owner more to devise systems which would ultimately save the owners considerable sums in operating costs. He felt that too often we have outmoded methods of writing specifications and that many engineers over-complicate systems when they shouldn't. Inaccurate estimates on the cost of jobs by the engineers, or design and correct specifications, and what we don't know about noise were covered by the speaker.

He decried the lack of basic thinking on the part of too many engineers and quoted from a book published in 1892 relating to the basics of the concept of make up air.

Mr. Bouillon felt that the basic problem in the construction business is that it is a one shot affair; that the average building owner only builds one building in their life time and too often they are stuck with a bad product.

He feels that the unfortunate thing is the attitude of downgrading in our industry is causing air conditioning to get a bad name and pointed out some experience where people prefer not to have it because their only experience and exposure to it has been poor.

He felt that each of us should have the following attitudes.

(1) Always give the customer just a little more than he's entitled to.

(2) Any contract between parties must be good for both parties.

After the question and answer period the meeting was adjourned at 10:15 P.M.

Larry Shea, Secretary



GOLDEN GATE CHAPTER



ASHRAE

VOLUME XV No. 9

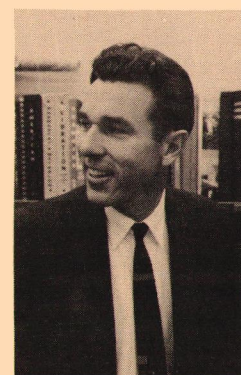
DECEMBER 1965

PROGRAM CHAIRMAN: AREL W. BERRIER

The next Golden Gate Chapter meeting will be held at the Engineers Club in San Francisco on December 2, 1965. The Social hour will be at 5:30 P.M., dinner at 6:45 P.M.

Our own Charles Bailey, the handsome young man in the picture, will present the following program.

"RE-ENTRY OF DANGEROUS OR FOUL FUMES BACK INTO THE VENTILATING AND AIR CONDITIONING SYSTEM."



Charles Bailey received his engineering degree from the University of California at Berkeley and except for a two year tour of duty in the Navy during World War II and a short tour of duty during the Korean conflict has worked for Shell Development in Emeryville ever since.

Chuck has had extensive experience in this field and his presentation will touch on various factors such as wind flow patterns around buildings, exhaust stack height, inlet and outlet weather protection devices, and relative positions of inlet and outlets in the system. His talk will be supplemented by slides as provided by John Clarke, supervisor of air conditioning and power house design, Union Carbide Corporation in Chicago, Illinois.

DECEMBER ANGEL

Cooling & Heating Engineers
Sausalito, California

Phone: 332-4252

3030 Bridgeway

FOG DISPENSER

ATTENDANCE AT THE NOVEMBER MEETING

MEMBERS

Carl Jordan	Buonaccorsi & Assoc.
Dave Rifkin	Cooling & Heating Eng.
John A. Lord	Robertshaw Control
Tom White	American Blower
Elmer F. Guy	Emerick Sheet Metal
Jim Williams	Ind. Steam
Mike Bekedam	Ind. Steam
Rod Roberts	Montgomery & Roberts
Jim Lazor	E. B. Ward Co.
Don McLeod	Simpson & Stratta
W. Berry	Marelch Mfg. Co.
Bill Barron	Wm. A. Barron Co.
Doug Kerry	Amer. Blower
S. Gramaglia	AIM Metal Prod.
Ory Gruber	Buonaccorsi & Assoc.
Reid Chappel	Kaiser Hosp.
Booth Thomas	Tuttle & Bailey
Bob Tuck	Tuttle & Bailey
John Werner	Trane Co.
Ken Mirov	Trane Co.
Arel Berrier	Berrier Co.
Gus Gendler	G. L. Gendler & Assoc.
L. Shea	Shea Equip. Co.
Dick Friedman	Engineered Air
Thos. Brewer	Calif. Hydronics
Sandy Sanford	Sanford Equip. Co.
Joe Beck	Atlas Heating Co.
George Aronovsky	ITT Hayes Furnace
Maurice Laks	G. L. Gendler
Ralph Williams	Lillard Co.
Donald Campbell	Austin Campbell Co.
Chuck Kopf	Fulton Sylphon
E. Leedom Jr.	Air Filter Sales & Se.
Fred Expey	ILG Elec. Vent. Co.
Jim Curtin	Philco
Bob Wistort	Booth Radiant Heat
John Capitolo	Johns-Manville
Gene Valerio	E.B. Ward & Co.
Bob Swezey	Burke & Co.
Karl Baldwin	Ramsey & Assoc.
Jack A. Palmer	Calif. Hydronics
Bob Phillips	Kennedy Eng.
Chuck Bailey	Shell Dev. Co.
Allan Ballard	Ballard Eng. Co.
Leo Dwyer	Ralston & Dwyer
Wallace MacLean	Aladdin Heating
Phil Beggs	Paul Beggs & Son
Bob Beggs	Paul Beggs & Son
Bob Ruth	Amer. Air Filter Co.
Frank F. Gonden	Bentley Engineer
Howard Friesen	Barber Colman
L. Pollack	Trane Co.
Jack Kniveton	Norman Wright Co.
P. Filios	Flame Air
Robert Boyer	Honeywell
Jim Witharm	Fraser & Johnston
G. Chesebro	Fraser & Johnston
Charlie Butcher	Johnson Service
Herman Bauer	Yanow & Bauer
W. H. Olson	G.L. Gendler
H. Gaffney	C. S. Hardeman
D. E. Keown	C.S. Hardeman
Jerry Howarth	Kramer Trenton
Al Lowey	Chrysler Airtemp
Max Wolff	Dill & Sederberg
Gerry Yaffe	Tempco
John Littleton	Calif. Hydronics
Clyde Wilson Reid	Clyde Equip.
Pete Knezevich	Dyna-Mac Systems
John Linford	Linford Co.
Walter Schmidt	K.S. Oliphant
Don Williams	Self
Frank Lockwood	Oak. Sch. Dept.
H. Duncan	Flame Air Inc.

MEMBERS

John Liskow	American Air Filt.
John Brose	The Brose Co.
M. Cable	Scott Co.
Ray Carrillo	Johnson Service
R. Emerson	Holland Co.
E. Collins	Safeway Stores
Jim Dana	G.M. Cooke Co.
Charles Harden	Farr Co.
Jim Van Buskirk	A.O. Smith
Rudy Pribuss	Reichel Eng.
Paul Bradley	Bradley Plbg.
Roy Skover	Cooling & Heating
M.H. Riffle	Meiser Eng.

SACRAMENTO

Ted Andrews	Farr
Leroy Peters	Dan Yoshpe
Larry K ----	Cooling & Heating
W. D. Rinefort	Carrier
Bob Sarro	Lennox
Roger McElligot	Mech. Supply Inc.
Leonard Stecher	L.S. Stecher
Clyde Burkey	Lillard Co.
Richard Stockwell	Sac. City College
Alexander Scheflo	R.M. Snyder
Jim White	Cooleu Co.
Edward Rios	L.S. Stecher
Jim Murphy	Powers Reg. Co.
Al E. Lueas	Honeywell
Robert M. Snyder	R.M. Snyder Assoc.
Pat McPeters	Sanford Mech.
Jim Jones	Atlas Mech.
Joe Clancy	State Arch.
Ken Ainsworth	L.S. Stecher
Fred Taylor	Dan Yoshpe
Jim Smith	Cooling & Htg. Eng.
James Duff	Worthington
Ted Georgior	Worthington
Al Routhier	State Office of Mech.
Vernon Hott	Powers Reg. Co.
Gene Logan	Trane Co.
Robert Paoluccio, II	L.S. Stecher

SAN JOSE

Robert Leonard	Trane Co.
G. Siegfried	AIM Metal Prod.

PUGET SOUND

Lincoln Bouillon	BCS
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RENO

Wm. Bulkeley	Dinter & Bulkeley
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GUESTS

Albert A. Crivelli	Pacific Pumping
Bob English	Simpson & Stratta
Carl Landers	Trane Co.
Bob North	Lillard Co.
Arthur Prendergast	Prendergast Assoc.
John H. Furnas	Ilg. Elec. Vent. Co.
Gene De Wree	N.J. Hatter Co.
Leo Pumphrey	Natkin & Co.
P. Guvral	Bentley Engrs.
Jack Chamberlain	Marelich Mfg. Co.
Terry Purcell	Western Asbestos
Urban Linderaker	Elof Hansson, Inc.
Joe Chenoweth	Honeywell
J.H. Emmons	C.S. Hardeman
G.R. Howard	Carrier
Don Evins	American Air Filter
Wm. Milligan	Robertshaw
G. Carlson	A.O. Smith
Jim Phillips	J.H. Phillips Co.
Gordon Goodsbura	Sanford Mech.

ATTENDANCE AT THE OCTOBER MEETING

MEMBERS

W. H. Olson
 Bill Barron
 Tom Cable
 Mike Reichlin
 Earl Jacobs
 Dick Hamilton
 Lewis Pollock
 R. F. Giovannini
 R. F. MacDonald
 Tom White
 Fred Espey
 S. A. Copland
 Carl H. Jordan
 D. E. Keown
 C. E. Butcher
 Fred Vann
 C. E. McLaughlin
 Karl Baldwin
 Ken Mirov
 Bill Kunz
 Lou Gramaglia
 G. Yaffe
 N. Jones
 H. Gaffney
 K. Guttman
 F. M. Palacios
 Dick Fugioka
 B. K. Tow
 Lawrence P. Wong
 Steve Wei
 Larry Rolison
 Karl F. Tulp
 Neil Eskra
 W. H. Crockwell
 Jim Dana
 Bob Beggs
 Jack A. Palmer
 L. E. Shea
 Dick Friedman
 Joe Beck
 Don Williams
 Frank B. Lockwood
 John A. Lord
 Rod Roberts
 Don Bachman
 Pete Knezevich
 Ariel Berrier
 Ray Wolford
 Le. E. Long
 Chuck Kopf
 Roger Chesebro
 Booth Thomas
 Bob Tuck
 Rudy Pribuss
 John Linford
 Chuck Bailey
 Robert Phillips
 Jim Williams
 Mike Bekedam
 Bob Montgomery
 Doug Kerby
 G. S. Baxter
 H. H. Yahagi
 Ed. Akizuki
 Mike Cachero
 Jim Van Buskirk
 Ralph Williams

G. L. Gendler & Assoc.
 W. A. Barron Co.
 Scott Co. of California
 Pacific Pumping Co.
 E.B.M.U.D.
 Monterey Mech. Co.
 Trane Co.
 Harry Lee Inc.
 R. F. MacDonald Co.
 American Blower
 Ilg Vent.
 Brakow & Murakami
 Buonaccorsi & Assoc.
 C. S. Hardeman Inc.
 Johnson Service
 Vann Engineering
 American Blower
 Ramsey & Assoc.
 Trane
 Powers
 AIM Metal Prod.
 Tempco
 Scott Co.
 C. S. Hardeman Inc.
 Kasin, Guttman & Assoc.
 Post Office
 GM & TR Simonson
 Westdocks, U. S. Navy
 Westdocks, U. S. Navy
 Bechtel
 Ray Winther Co.
 Edw. B. Ward & Co.
 Ray Winther Co.
 Gen. Comb. Equip.
 G. M. Cooke Co.
 Paul W. Beggs & Son Inc.
 California Hydronics
 Shea Equip. Co.
 Engineered Air
 Atlas Heating
 Don Williams Eng.
 Oakland Public Sch.
 Robertshaw Controls
 Montgomery & Roberts
 Powers
 Dyna-Mac Systems
 Berrier Sales
 Materials Survey
 Wagner Elect. Corp.
 Fulton Sylphon
 Fraser & Johnston
 Tuttle & Bailey
 Tuttle & Bailey
 C. R. Reichel Eng.
 Linford Air
 Shell Development Co.
 Kennedy Engineers
 Industrial Steam
 Industrial Steam
 Montgomery & Roberts
 American Blower
 R. B. Liles
 Bechtel
 Norman S. Wright Co.
 Bechtel
 A. O. Smith Corp.
 Lillard Co.

MEMBERS

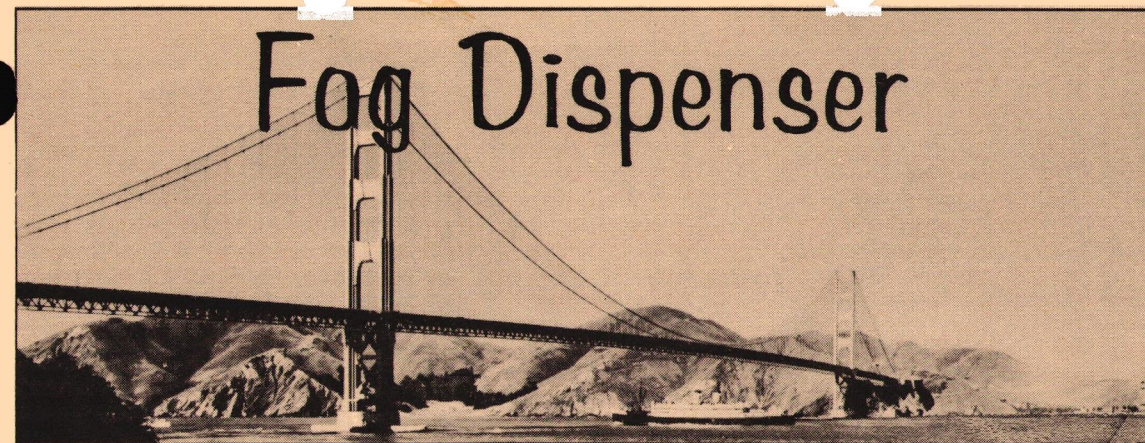
Charles Dombitzby
 F. Salter
 Clyde E. Walters
 Jim Breese
 John Koop
 Edwin C. Leedon, Jr.
 Bud Ferry
 W. L. Clarke
 R. L. Herman
 Al Mudica
 Jim Curtin
 Don McLeod
 Thos. C. Douglas
 Lyle Schuelke
 Leo Dwyer
 John Brose
 Gordon Hudson
 Lowell Young
 Ray Plass
 Russ Westover
 Darrell Robinson
 Bob Wistort
 Dick Charles
 Bob Swezey
 Tom Gilbertson
 Per Sonander
 Howard Friesen
 Sanford Fox
 Walter Schneider
 John Capitolo
 Ray Carrillo

GUESTS

Bill Milligan
 Al Palmer
 Albert A. Crivelli
 Don Scott
 John Furnas
 Pete Erdmanski
 G. E. Siefried
 Mike Cory
 W. Benz
 Jayant Pandya
 Edwin R. Kaufman
 Philip Chien
 John Chapman
 Duncan Kelly
 Adrian W. Smith
 Sam Giseput
 D. R. Reznick
 Robert Lincoln
 Don Kinsley
 Tom Timm
 Laurie Ingram
 Jim Witharm
 Pat Geis
 Dave Kindorf
 R. R. Henderson
 Jim Limbaugh
 Bill Brewster
 Mike Mansfield
 Bob English
 Bob Speidel
 Jeff Busler
 Bob Pederson
 Jack Chamberlain
 Terry Purcell

PBQ & D Inc.
 PBQ & D
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 C. A. Gillet Co.
 Fluor Products
 Air Filter Sales & Serv.
 A. J. Bouey
 GM & TR Simonson
 Calpack
 Hess-Greiner & Pollard
 Philco
 Simpson & Stratta
 General Painting Co.
 Kewanee Boiler Co.
 Ralston & Dwyer
 The Brose Co.
 Kitsap Dryinns Assn.
 Valley Sheet Metal
 Ray Burner Co.
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 Johnson Service Co.
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 Ilg. Elec. Vent. Co.
 Powers
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 Vann Engineering
 Marelich Mfg. Co.
 G. M. Simonson
 Post Office
 Keller & Gannon
 Ray Winther Co.
 G. M. Cooke Co.
 Army Engineers, Presidio
 Hess-Greiner & Pollard
 Airfan Eng. Co. L. A.
 Montgomery & Roberts
 Laars Northwest
 Cleaver-Brooks, Milw.
 Material Survey
 Frazer & Johnston
 Engineer Air Systems
 Montgomery & Roberts
 Bechtel
 The Payne Co.
 Fluor Products
 Crane Co.
 Simpson & Stratta
 Bechtel
 Shea Equip. Co.
 Shea Equip. Co.
 Marelich Mfg. Co.
 Western Asbestos



GOLDEN GATE CHAPTER



ASHRAE

VOLUME XV No. 8

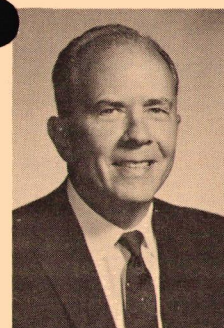
NOVEMBER 1965

PROGRAM CHAIRMAN: AREL W. BERRIER

The Golden Gate Chapter will be host to the Sacramento Chapter at the next meeting that will be held on November 4, 1965 at the Jack London Inn, Jack London Square, Oakland, California, Cocktails 6:00 to 7:00 P. M., Dinner promptly at 7:00 P. M.

"WHAT'S WRONG WITH OUR INDUSTRY"

We are fortunate in having Mr. Lincoln Bouillon at this meeting who will speak on "What's wrong with our Industry". The delegates to the Regional X conference from Southern California where Mr. Bouillon presented a similar talk, termed it the most interesting meeting of the year.



Mr. Bouillon has been active in ASHRAE for many years, and is now President-Elect. He received his B.S. in both Mechanical and Electrical Engineering from the University of Pennsylvania, and except for service during World War II has been active in the consulting field. He is now Chairman of the Board of Bouillon, Christofferson and Schiarer, consulting engineers in Seattle, who employ a staff of some people.

This edition of the Fog Dispenser is being sent to all the Sacramento Chapter members and the directions for the Jack London Inn are very simple. Continue on Freeway past San Francisco Oakland Bay bridge approximately 2 miles to Broadway turnoff. Turn right on Broadway until end at Jack London Square.

NOVEMBER ANGEL

Dyna-Mac Systems

(R. F. MAC DONALD CO.)

850 Mahler Road • Burlingame, California • Phone: 697-0770

MEMBERSHIP

The membership drive has begun. Please ask all of your friends and associates, that are eligible to join, to become a member of the Golden Gate Chapter of ASHRAE. We lost a considerable number of members to the new San Jose Chapter. Our goal this year is to replace these lost members, plus, add a few more to our roster.

Membership application blanks are available from the membership committee:

Robert H. Tuck	Phone 434-3820
Millar Clarke	" 392-5338
Bob Boyer	" 826-9100
George Aronovsky	" 756-8464

Also, each of our chapter officers will have a supply of application blanks:

G.L. Gendler	Phone 841-3456
Arel Berrier	" 621-7417
Larry Shea	" 362-0740
Robert Voelz	" 981-1555

Soon we will distribute a small supply of application blanks to each of the major engineering firms in the Bay Area. This list will be published in the "Fog Dispenser."

When you bring prospective members to the meetings, please contact the membership committee, so they can be introduced.

With everyone's assistance, the membership drive will be a big success. Remember -- ask a friend to join ASHRAE.

Robert H. Tuck

SPECIAL AIR - CONDITIONING REGULATIONS INSTITUTED AS A RESULT OF EASTERN DROUGHT

TO: ALL EMPLOYEES-UNITED ENGINEERING CENTER

FROM: BUILDING MANAGEMENT

AIR CONDITIONING RESTRICTION DUE TO WATER SHORTAGE

The Mayor of New York has announced that due to the continued water emergency, commercial air conditioning systems must be curtailed. The regulation will require that the United Engineering Center operation of our cooling system be reduced six hours per working day.

In order to obtain the maximum benefit from the system during the periods of reduced operation and to insure the comfort of all employees, the following internal regulations must be observed:

1. Cooling units will be operated on alternate floors for periods of one hour and then switched. For instance, from 9:00 A.M. - 10:00 A.M., odd-numbered floors will be cooled. From 10:00 A.M. - 11:00 A.M., even-numbered floors will be cooled, and so on through the day.
2. Visiting between floors - employees on un-cooled floors may visit cooled floors for periods not to exceed 10 minutes per visit. Employees with even-numbered telephones will visit odd-numbered floors. Those with odd-numbered phones will visit even-numbered floors. Employees without phones may not visit cooled floors except for business purposes.
3. When going from floor to floor, use elevators rather than walk stairs in order to avoid raising body temperature because of exertion.
4. If business requires you to go from one cool floor to another cool floor, do not stop off on an un-cooled floor. To do so will cause you to lose the coolness and thereby raise the temperature level on the floor you are going to visit.
5. Coffee Breaks - Hot coffee is not to be drunk immediately. Allow to cool.
6. When two or more employees are together, lighting of cigarettes is to be avoided until all who desire to smoke are present, in order to reduce the number of matches being ignited. If only three are present, two matches may be used, or smoking should be deferred until a fourth joins the group.
7. Messengers and service personnel are being instructed to walk fast in order to generate a breeze.
8. Under no circumstances should windows be opened.

We don't often indulge in levity, but thought you might get a chuckle from the above, which is going-the-rounds with appropriate substitution of building name because it strikes so close to home. We wonder how many of you got through half of it, as we did, before realizing it was a spoof.

LETTERS TO THE EDITOR

Dear Editor:

During all the B-S which followed dinner and preceeded the regular program I kept thinking that perhaps the large attendance was not because of the way the meeting was being expedited.

Please, please, please! Limit the committee reports to only a portion of those existing—keep it to those that are pertinent and then no more than 5 in any one meeting—or in no case should business take over 20 minutes.

For the 120 people in attendance an extra 1/2 hour means 60 man hours—we cannot afford this.

John Linford

Mail or Call News To:

EDITOR

FOG DISPENSER
% DYNA-MAC SYSTEMS
R.F. MACDONALD CO.
850 MAHLER ROAD
BURLINGAME, CALIFORNIA
PHONE: 697-0770

NEED FOR CAREER COUNSELORS

The Bay Area Engineering Council, consisting of representatives from all the Bay Area engineering societies, proposes to act as the central agent for engineering career counseling volunteers from within the industry itself.

This group is currently notifying officials of all Bay Area school districts, junior colleges, and colleges that they stand ready to provide speakers and guidance counselors, who if called upon, can present before students the opportunities, challenges and realities of a career in engineering.

Society representatives were asked to prepare a list of members who would volunteer for this most needed and rewarding service. A questionnaire will be enclosed in one of the future editions of the Fog Dispenser asking for volunteers from our society.

Robert Phillips
Educational Committee

Change of Affiliation and/or Address

John E. Snell, Nebraska Chapter
403 N. Saddle Crk Rd., Omaha, Neb.
Dick Fujioka, Simonson & Simonson
Home addr: 929 Colusa Ave., Berkeley
Clyde E. Wolters
3970 19th St., San Francisco, 94114
John M. Lenihan, Burke & Co.
1815 Bayshore Hwy., Burlingame, Calif.
Leo Dwyer
121 Second St., San Francisco
H. Yahagi, Bechtel Corporation
112 Market St., San Francisco
Ralph E. Williams, Home addr:
547 Silverado Drive, Lafayette
(Mailing no charge)
D. E. Keown, C. S. Hardeman Inc.
910 Harrison St., San Francisco
R. E. Swezey, Burke & Co.
1815 Bayshore Hwy., Burlingame, Calif.
Mike Reichlin
4289 Maple Ave., Oakland, California
Ray L. Herman, California Packing Corp.
215 Fremont St., San Francisco

R. L. Herman

Attendance Committee

SAN JOSE RECEIVES CHARTER

November 1st marks the Charter meeting for the new San Jose Chapter of A.S.H.R.A.E. With only eight months elapsed since the first meeting of the steering committee, this new Chapter with over 70 members enrolled, is ready to receive its charter. The A.S.H.R.A.E. Journal in the past months has been filled with "Candidates for A.S.H.R.A.E. membership" from the San Jose area bearing witness to the enthusiasm behind this drive to establish Chapter Number 101.

Mr. J.W. May and Mr. Lincoln Bouillon and Rod Kirkwood will be on hand to make the presentation of the charter. Many Society dignitaries, contractors and engineers from all over the State of California are expected to be in attendance. The San Jose Chapter 101 wishes to extend to all of its neighboring chapters an invitation to join us in our celebration on November 1st.

The meeting will be held at the San Jose Hyatt House, intersection of Highway 101 and 17 in San Jose, on November 1, 1965 cost: \$7.50 per person. Includes dinner and special entertainment, with cocktails beginning at 6:30 P.M., dinner at 7:30 P.M. A note to Mr. Carl Zippenfeld, Chapter secretary, will insure your reservation. Mr. Zippenfeld's address is 1123 Dwyer Road, San Jose, Cal.

1965-1966 STANDING AND SPECIAL COMMITTEES

COMMITTEE	CHAIRMAN	MEMBERS
Membership	Robert Tuck	George Aronovsky Millar Clark Robert Boyer
Program	Arel Berrier	Lewis Long
Reception	Jack A. Palmer	Robert Beggs Charles Butcher Charles Bailey John Koop Irving Alger Robert Linford
Technical	Kenneth Mirov Carl Jordon	Mike Bekedam Charles Harden Carl Jordan
Attendance	Ray L. Herman	Rodney Roberts James P. Dana John Brose
Publicity	Ronald Wilson	Richard Friedman Siegmond Kulka Roger Chesbro
Finance	Robert Voelz	Richard Friedman James Williams Joseph Beck
Education	Robert Phillips	George Aronovsky Lawrence Shea Robert Montgomery Richard A. Charles
Roster	David Rifkin	R. K. Kelly Jim Booth
Engineering Council	Robert Voelz	
Research Fund	Joseph Beck	
Dance	Herb Duncan	
Editor Fog Dispenser	Pete Knezevich	
Angel Procurement	Joseph Murray	
Region X Delegates	Arel Berrier Lawrence Shea	

GOLDEN GATE CHAPTER SCHEDULE OF MEETINGS 1965-1966

Program Chairman - Arel Berrier

- November** - Joint meeting with Sacramento Chapter - Jack London Inn, Oakland. Mr. Lincoln Bouillon, Vice President ASHRAE will speak on "What's wrong with our industry."
- December** - "Re-entry of foul or dangerous fumes back into ventilation and air conditioning systems" will be discussed by Mr. Charles Bailey of Shell Development Co.
- January** - "Legal and Business aspects of our industry" will be discussed by Mr. Don Locke.
- February** - "Cold Storage of Grapes and Tree Fruits" will be discussed by Mr. T. Smith of Sanger Ice and Cold Storage. Program Chairman - Jerry Howarth.
- March** - Description of the first completely automated and computerized heating and air conditioning system. Speaker to be announced later. Program Chairman - John Lord.
- April** - To be announced later.
- May** - Student meeting - complete details to follow.
- June** - Social Event, Program Chairman - Herb Duncan.



Fog Dispenser

GOLDEN GATE CHAPTER



ASHRAE

VOLUME XV No. 7

OCTOBER 1965

PROGRAM CHAIRMAN: PETE KNEZEVICH

The next Golden Gate Chapter meeting will be held at the Engineers Club, San Francisco, on Thursday, October 7, 1965. Social Hour - 5:30 to 6:30. Dinner promptly at 6:45 p.m.

"APPLICATION - and MISAPPLICATION of HOT WATER BOILERS"



Mr. Tom L. Timm, Senior Sales Engineer, Firetube Division of the Cleaver Brooks Company will present the "kickoff" meeting of the new season for the Golden Gate Chapter.

With the aid of slides - Mr. Timm will discuss specific conditions relating to boilers in hot water systems based on his company's engineering and service departments experience - and particularly as they relate to recommendations for good boiler layout, boiler operation and long boiler life.

Items such as air removal from the boiler, expansion tank location; system pumps interlock with the boiler, proper over-pressure, minimum operating temperature, prevention of cold shock, prevention of hot shock, lead-lag start and lead-lag modulation controls will be covered.

The majority of recommendations in this talk will apply to the application of any firetube boiler.

Tom Timm is known has been with the Cleaver Brooks Company for 11 years. He holds a B.S. Degree in Mechanical Engineering from Purdue University, and served on active duty with the Air Force during the Korean conflict.

Organizations: NSPE, WSPE, SAM, ANDC.

OCTOBER ANGEL

MECHANICAL SUPPLY INC.

821 Howard Street • San Francisco • Phone: 986-0565

ATTENDANCE AT THE MAY MEETING

MEMBERS

Jim Van Busrick
 Bob Swezey
 Peter S. Filios
 Carl H. Jordan
 Ward Clark
 Don McLeod
 Gerry Yaffe
 Gus Gendler
 Alex Boome

Jos. E. Murray
 George N. Aronovsky
 Jim Lazor
 Tom Higashioka
 Gene Valerio
 Miles Suda
 Duane Hansen
 Jim Meyers
 Joe Beck
 T. J. White
 Chuck Kopf
 Doug Kerby
 Karl Baldwin
 Chuck McLaughlin
 Bob Phillips
 Don Locke
 Bill Barron
 John A. Lord
 Sig Kulka
 S. Wei
 H. Yahagi
 Jack Palmer
 W. H. Olsen
 Tom Brewer
 L. E. Shea
 Robert Voelz
 Arel W. Berrier
 Jim Breese
 Karl Guttman
 Clyde Wilson Reed
 Ray Wolford
 Booth Thomas
 Don Delany
 Bob Montgomery
 Ron Wilson
 John Lenihan
 Phil Beggs
 Bud Dusenburg
 Jim Williams

A. O. Smith
 Burke & Co.
 Flame Air
 Buonaccorsi & Murray
 The Marley Company
 Simpson, Stratta & Assoc.
 TEMPCO
 G. L. Gendler & Assoc.
 Alexander Boome
 Construction Engrs., Inc.
 B & M
 ITT Direct Fired Equipment
 E. B. Ward Co.
 Higosh Assoc.
 E. B. Ward & Co.
 G. L. Gendler & Assoc.
 Gayner Engineers
 J. L. Meyers Co.
 Atlas Heating
 American Blower
 Robert Shaw
 American Standard
 Ramsey & Assoc.
 American Blower
 Kennedy Engineers
 Farr Company
 William A. Barron Co.
 Robert Shaw
 Valley Sheet Metal Co.
 Bechtel
 Bechtel
 California Hydronics
 G. L. Gendler & Assoc.
 Calif. Hydronics Corp.
 Shea Equipment Co.
 Skidmore, Owings & Merrill
 Berrier Sales
 C.A. Gillet Co.
 Kasin, Guttman & Assoc.
 Clyde Equipment Co.
 Materials Survey Assoc.
 Tuttle & Bailey
 Barber Colman
 Montgomery & Roberts
 American Air Filter
 Burke & Co.
 Paul W. Beggs & Son
 Robertshaw
 Industrial Steam

MEMBERS

Ted Skeels
 Ed Leedom
 Frank Lockwood
 Per Sonander
 C. L. Arnold
 Ray Plass
 Chad Clark
 Don McLeod
 Gerald Kasin

Bob Wistort
 Mauriel Laks
 Don Campbell
 Tom Gilbertson
 A. R. Lowey
 Terry Howarth
 Bob Tuck
 Ed Leedom
 Ken Lloyd
 J. M. Nussbaum
 W. E. Erickson
 Richard E. Gee
 John Werner
 Jim Dana
 Herb Duncass
 Robert Ruth

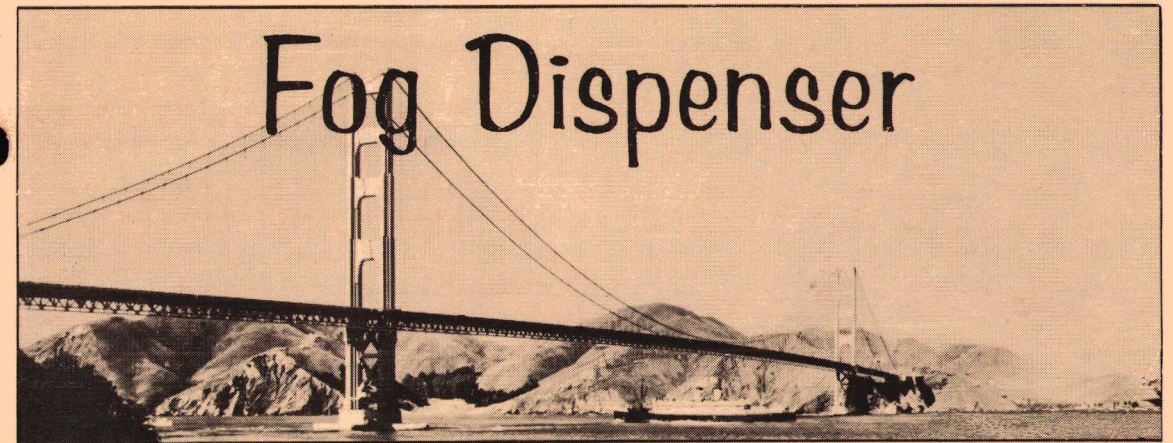
Owens Corning
 Air Filter Sales
 Oakland School
 S.O. M.
 Am. Blower
 Ray Burner Co.
 Gustin Bacon
 Simpson & Stratto
 Kasin-Guttman &
 Assoc.
 Booth Radiant Heat
 G. L. Gendler
 Trane Co.
 Johnson Service
 Airtemp
 Kramer-Trenton Co.
 Tuttle & Bailey
 Air Filter Sales
 Barber Colman
 J. M. Nussbaum
 Erickson & Ribacchi
 Bayho, Weir & Finato
 Trane Co.
 Rinco Eng.
 Flame Air
 American Air Filter

GUESTS

Art Bland
 Bud Anderson
 Dick Morehead

Jesse Mc Clintock
 Walter Hanthorn
 Philip Chien
 T. Francis
 Don Stock
 Don Barrington
 Ted Gilles
 Don A. Nack
 Chris Arnold
 Tom Conroy
 Al Tucker
 Sam Yamauchi

Custom Aire
 A & B Metal Products
 Alex Boone Cons. Eng.,
 Inc.
 Tuttle & Bailey
 Buonaccorsi Assoc.
 Keller & Gannon
 Safeway
 Keller & Gannon
 D. R. Barrington Co.
 Sennoy
 Nack & Sunderland
 SCSD
 Clyde Equipment Co.
 Brose Co.
 G. L. Gendler & Assoc.



GOLDEN GATE CHAPTER



ASHRAE

VOLUME XV No. 6

JUNE 1965

PROGRAM CHAIRMAN: RICHARD FRIEDMAN

The next Golden Gate Chapter meeting will be held at the Engineers Club, San Francisco, on Thursday, June 3, 1965. Social Hour - 5:30 to 6:30. Dinner promptly at 6:45 P.M.

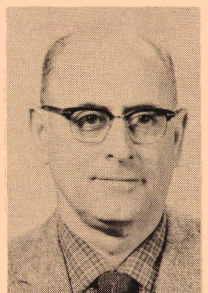
"ENGINEERING EDUCATION - THE CAL POLY APPROACH"

"Engineering Education - The Cal Poly Approach will be discussed by three eminent members of the Cal Poly staff.



Harold P. Hayes, Dean of Engineering, Cal Poly, since 1952. Graduate of University of Santa Clara. Additional graduate work, Stanford University. Industrial experience with General Electric and Westinghouse. Registered professional engineer and Fellow of ASHRAE.

James M. McGrath, at Cal Poly since 1946 and Head of the Air Conditioning and Refrigeration Engineering Department since 1958. Graduate of Santa Barbara College and holds master's degree in Education from Cal Poly. Principal experience with U.S. Army Transport Service and as officer in U.S. Navy. Member, ASHRAE.



Continued on Page 2

JUNE ANGEL

HESS, GREINER & POLLAND

1485 Bayshore Blvd. • San Francisco • Phone 586-1321

Published monthly by the Golden Gate Chapter of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, 1371 - 15th Avenue, San Francisco, California 94122. LO 6-2740.

OFFICERS AND BOARD OF GOVERNORS 1965 - 1966

G. L. Gendler..... President
Arel Berrier..... Vice President
Larry Shea..... Secretary
Robert Voelz..... Treasurer

BOARD OF GOVERNORS

Thomas Brewer
Richard Friedman
George Aronovsky

COMMITTEE CHAIRMEN

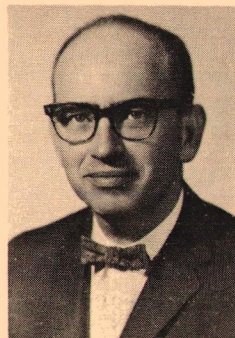
Program
Attendance
Membership TO
Finance
Technical (Weather Data) BE
Reception
Roster ANNOUNCED
Scholarship & Education

FOG DISPENSER STAFF

EditorPete Knezevich
Angel ProcurementJoe Murray

President's Corner

Gus Gendler



The membership owes a big vote of thanks to Tom Brewer for his year of leadership and service to our Chapter.

Your new officers are making plans for next year. Arel Berrier would welcome program suggestions. New committee chairmen have not all been selected, so please call me if you are interested in an assignment. You will find that participation in Committee work is a very rewarding experience

Payment of your pledge to Dick Friedman for the Cal Poly Workshop Program is most important. Please send Dick your check now so we can make a good showing at the next meeting when the agreement will be signed and presented to Dean Hayes.

Congratulations to the new San Jose Chapter. They had 103 members and guests at their first meeting, with 59 membership applications for Chapter and National ASHRAE.

Let's make it a big turnout for our June meeting to indicate our support and interest in Cal Poly and Dean Harold Hayes and his fine staff!

Please mail your check for Chapter Dues to:

Mr. Ed J. Meehan, Secretary
Golden Gate Chapter, ASHRAE
1371 - 15th Avenue
San Francisco, California

ASHRAE - Golden Gate Chapter MINUTES - May 6, 1965 ENGINEERS CLUB

The meeting was opened by introduction of guests and members. The minutes were dispensed with as they are printed in the Fog Dispenser.

The first order of business was the transfer of the gavel from Tom Brewer to Gus Gendler, who in turn presented the outgoing president with a certificate of appreciation and a lapel pin for 1964-1965.

Larry Shea reported that our finances show a deficit of approximately \$800 due to the publication costs of the weather data booklet.

Carl Jordan reported that the attendance was lower than the previous meetings, and that only 90 members and guests were present.

Arel Berrier announced the special program for next month with Dean Hayes and other faculty members from Cal Poly who will outline the courses offered by this college in heating, air conditioning and refrigeration. Our Chapter will enter into a formal agreement with Cal Poly at that meeting and we will present our first check to them on the Work-Ship Program.

George Aronovsky gave a report on membership and Joe Beck announced that all of the 1965 rosters have been mailed.

Dick Friedman was not present, but Arel Berrier announced that as of April 13, 1965 members have pledged \$1100 and \$310 in cash has been received on the Work-Ship program.

Don McLeod reported that 133 of the new weather data booklets have been sold at \$2.00 each.

Under new business, Joe Murray appealed for more angels for the Fog Dispenser. Herb Duncan announced the dinner dance of the Sacramento Chapter on June 5 at the El Madero Country Club.

Gus Gendler appointed an auditing committee of Bob Ruth, Harold Scandrit and Karl Baldwin.

Alex Boome announced the initial meeting of the new San Jose Chapter of ASHRAE on November 10 at the Holiday Inn at Sunnyvale.

Gus Gendler reminded the Chapter of the annual ASHRAE meeting in Portland this summer, July 5, 6 and 7th and urged interested members to attend.

Mr. Kasin brought up the subject of approval of various types of insulated ducts and indicated that this field should be explored to clarify approved products, etc.

Bill Barron introduced the first speaker of evening Mr. Chris Arnold of Stanford University on the subject of School Construction System Development. Mr. Arnold explained this project is sponsored by a subsidiary of the Ford Foundation and its program is to seek out and develop a different approach to the design, bidding and construction of schools. His talk was illustrated by many interesting slides showing fundamental studies on utilization of space based on a mechanical service module. Schools in the past have been determined largely by the architect and the engineer has been forced to design the mechanical system as best he could to fit the structure. Under the SCSD program manufacturers were consulted and they advised the space necessary for their equipment, and the physical structure built around these requirements. The result is a module with a duct furnace and air conditioning unit on the roof.

The exploration and development work by SCSD and the various manufacturers involved in this program has now been compiled and is available to architects and engineers.

The first mechanical engineer selected under this program which will consist of a total of 20 schools to be built by 1967, was Mr. Donald Nach, our second speaker. He outlined the various problems in using the module approach and also indicated the mechanical engineers role has been reduced to a layout draftsman.

There were many questions from the floor regarding noise, economy of construction and maintenance. Many members felt this was a very interesting meeting, but the subject was so broad and involved that it was difficult to cover in a single evening. The meeting was adjourned at 10:30 P. M.

Arel W. Berrier, Secretary

Continuation from Page 1

Rodney G. Keif, faculty member at Cal Poly since 1960. Graduate of Kansas State University with additional graduate course work in Education at Cal Poly. Principal experience as sales and application engineer in Oklahoma. Registered professional engineer in Oklahoma.

The Golden Gate Chapter will formally sign the "Workshop Agreement" with Cal Poly at this meeting and present the school with the first of what the Chapter hopes will be many checks in the years to come.

The Chapter has received \$830.00 to date with a total of \$1200.00 pledged towards the "Workshop Program".

Have you pledged your fair share towards the success of this most important project?

Here is an opportunity to participate in a most important program. Pledge what you can - but pledge now - today!

ATTENDANCE AT THE APRIL MEETING

MEMBERS

Gene Valerio
M. A. Riffle
John Mathie
Jerry Siegfried
Louie Gramaglia
Charles Gillet
Wallace MacLean
Jack Sprott
Steve Wei
H. Yahagi
Allan M. Ballard
Karl Guttman
Charles Butcher
Ken Miror
Jim Dana
John A. Lord
Rudy Pribuss
Phil Beggs
Leonard J. Brown
Ron Wilson
K. T. Belotelkin
G. N. Aronovsky
Ralph Williams
Pete Filios
Herb Duncan
Frank Gonder
John Koop
Mike Reichlin
Don Kirtley
Bud Ferry
John Hawks
Clyde E. Wolters
Ray L. Herman
Frank B. Lockwood
Darrell Robinson
Chuck Kopf
Bill Barron
Earl Jacobs
John Capitolo
Miles Suda
Edward Weiss
Ross Sherrill
Don Locke
Tom Douglas
Al West
Booth Thomas
Al Tucker
Lewis E. Long
David Rifkin
Ed Akizuki
Ken Lloyd
Fred Vann
Lewis Pollock
Don Ribacchi
Bob Wistort
Karl Baldwin
Rod Roberts
Sig Kulka

E. B. Ward Co.
Kaiser Engineers
E. B. Ward Co.
A. I. M. Metal Products
A. I. M. Metal Products
C. A. Gillet Co.
Aladdin Heating Corp.
Ray Burner Co.
Bechtel Corp.
Bechtel Corp.
Ballard Engineering Co.
Kasin, Guttman & Assoc.
Johnson Controls
Trane
G. M. Cooke Co.
Robert Shaw
C. R. Reichel Eng.
Paul W. Beggs & Son
Bayha, Weir & Finato, Inc.
American Air Filter
K. T. Belotelkin & Assoc.
I T T Reznor-Hayes-Norman
Lillard Co.
Flame Air
Flame Air
Bentley Engr.
Fluor Products
Pacific Pumping Co.
Norman S. Wright
A. J. Bovey Co.
John Hawks Co.
San Francisco
Western Knapp
Oakland School Dept.
Bechtel
Robertshaw
Wm. Barron Co.
East Bay M. U. D.
Johns Manville
G. L. Gendler & Assoc.
Fluor Products

Farr Co.
Douglas Insulation
Colan Heating
Tuttle & Bailey
The Brose Co.
Wagner Elect. Corp.
Air Floor Co. of Calif.
N. S. Wright Co.
Barber Colman
Vann Eng.
Trane Co.
Erickson-Ribacchi
Boothe Radiant Heat
Ramsey & Assoc.
Montgomery & Roberts
Valley Sheet Metal Co.

MEMBERS

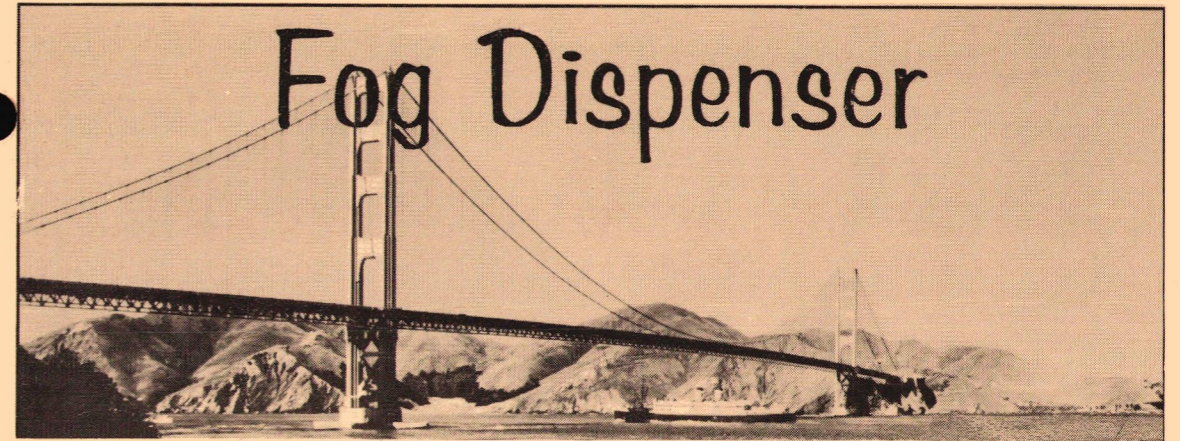
Jim Van Buskirk
Pete Knezevich
Don McLeod
Clyde Wilson-Reid
Jack A. Palmer
Bob Tuck
Irving Alger
Thos. E. Brewer
Arel W. Berrier
Dick Friedman
Robert Voelz
Jack Kniveton
M. F. Clarke
Gus Gendler
L. E. Shea
Joe Beck
Gerry Yaffe
Don Campbell
Art Ciapponi
Richard E. Gee
Bob Swezey
Jose Murray
Carl H. Jordan
C. E. McLaughlin

A. O. Smith Corp.
R. F. MacDonald Co.
Simpson, Stratta & Assoc.
Clyde Equipment Co., Inc.
California Hydronics
Tuttle and Bailey
G. M. Simonson
Calif. Hydronics
Berrier Sales
Engineered Air
Skidmore, Owings & Merrill
Norman S. Wright
G. A. & T. R. Simonson
G. L. Gendler & Assoc.
Shea Equipment Co.
Atlas Heating
Tempco
Trane
Pacific Pumping Co.
Bayha Weir & Finato, Inc.
Burke and Co.
Buonaccorsi and Murray
Buonaccorsi and Murray
American Blower

GUESTS

Bob Pedersen
Dave Kindorf
Lance M. Walden
Ken S. Tong
Bill Davidson
Robert R. Lambert
Cyril S. Sjoberg
Jim Hellwarth
Duncan Kelly
David Glascock
Ralph Craig
Bob Beggs
F. C. Saunders
J. W. Sweeney
R. C. Taylor
Leo Pumphrey
Al Mockus
Ernest Wong
Jim Williams
Mike Bekedam
Dick O'Mania
Walter Hanthorn
Lowell L. Young
Wm. Pacchetti
Thomas H. Conroy
W. E. Erickson
Max Wolff
Art Bland
Don Huffine
John Bush
Robert Montgomery

Shea Equip. Co.
Montgomery & Roberts
C. A. Gillet Co.
Earl & Assoc.
Ray Winther
Air-Factors Inc.
J. L. Meyers
Trane
G. M. Cooke Co.
Glascock Co., Inc.
California Hydronics
Paul Beggs & Son
Aiolite Louvers
Reznor Mfg. Co.
American Air Filter
Natin Co.
Wonder Metal Products
Wonder Metal Products
Industrial Steam
Industrial Steam
Bentley Eng.
Buonaccorsi & Murray
Valley Sheet Metal
State Fire Marshal
Clyde Equipment Co.
Erickson-Ribacchi Assoc.
Dill & Sederberg
Custom Aire
N. S. Wright Co.
N. S. Wright Co.
Montgomery & Roberts



GOLDEN GATE CHAPTER



ASHRAE

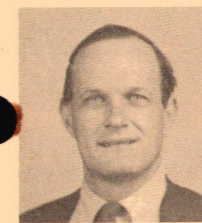
VOLUME XV No. 5

MAY 1965

PROGRAM CHAIRMAN: BILL BARRON

The next Golden Gate Chapter meeting will be held at the Engineers Club, San Francisco, on Thursday, May 6, 1965. Social Hour - 5:30 to 6:30. Dinner promptly at 6:45 p.m.

"SCSD - THE SCHOOL CONSTRUCTION SYSTEMS DEVELOPMENT PROGRAM"



Mr. Chris Arnold with the SCSD project at Stanford University will discuss the background of the SCSD program from its inception through the bidding phases and the construction and testing of a mock-up building.

Mr. Arnold is a graduate in architecture from the University of London, a member of the Royal Institute of British Architects, and a licensed architect in the state of California. Immediately prior to joining the SCSD program he was with the architectural firm of John Lyon Reid where he had special responsibilities for the office in the area of architectural and mechanical design and coordination, in particular for the U.C. Medical Research Buildings in San Francisco.

Mr. Donald H. Nack, president and principal engineer with Nack and Sunderland, Consulting Mechanical Engineers in Pasadena, will discuss the role of the consulting mechanical engineer in the SCSD program and the application of the SCSD data to particular jobs. His firm is presently doing the mechanical design work on three schools under the SCSD program.

Mr. Nack attended the University of Wisconsin and after service with the U.S. Navy as engineering division officer, he returned to the University of Southern California and received a B.E. degree in mechanical engineering. Previous to the formation of Nack and Sunderland in 1954 he was with such firms as Stone and Webster, Stiles Clements, and Kistner, Wright and Wright. He is a member of ASHRAE, ASME, and CEAC, and is Past President of the Mechanical Engineers Association of Southern California.

The SCSD program is a new and completely different approach to the design, bidding, and construction of schools. Since the program has taken bids and awarded, for example, one mechanical contract, one structural contract, etc. for the construction of a dozen schools in ten different school districts, it has created both interest and controversy. The May meeting should be no exception.



MAY ANGEL

HESS, GREINER & POLLAND

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Published monthly by the Golden Gate Chapter of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, 1371 - 15th Avenue, San Francisco, California 94122. LO 6-2740.

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Program G. L. Gendler
Attendance Carl Jordan
Membership George Aronovsky
Finance Larry Shea
Technical (Weather Data) Irving Alger
Reception Robert A. Wistort
Roster Joseph C. Beck
Scholarship & Education Richard Friedman

FOG DISPENSER STAFF

Editor Pete Knezevich
Feature Writer Jim Booth
Angel Procurement Joe Murray

SAN JOSE CHAPTER - ASHRAE FIRST MEETING

The first meeting of the San Jose Chapter, ASHRAE will be held at The Holiday Inn, Lawrence Expressway at Bayshore Freeway, Sunnyvale on May 10th. Social hour 6:00 p.m. Dinner promptly at 7:00 p.m. Please contact Mr. Carl Fullman at 297-6374 or Mr. Richard Gurries at CY 3-6670 for reservations.

Funny - But It Works

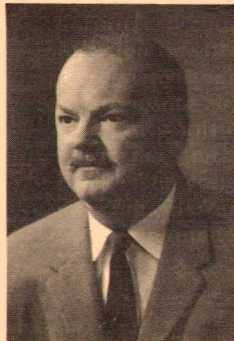
Take your house number and double it. Add 5, then multiply by half a hundred. Add your age, then add the number of days in a year (not a leap year), and subtract 615.

The last two figures will be your age; the others will be your house number.

- From *The Hoosier Pacesetter*

President's Corner

Thomas E. Brewer



This has been one of the shortest years that I can remember. It seems like only yesterday that the gavel of the presidency of the Chapter was turned over to me by Jack Kniveton, and now here I am, turning it over to Gus Gendler.

In this year of Chapter operations, several of our projects have become realities. Irving Alger and his Technical Committee have updated our Weather Data Manual. It has been approved by the National, and it is now on sale at \$2.00 per copy by a committee headed by Don McLeod.

We have secured the National Semi-Annual Meeting for January, 1970; we have secured an exhibit to be held at the same time. We have whipped the badge problem with our new, permanent badges.

Dick Friedman's Workshop Program is well on its way to being a 100% success due to the efforts of Dick and his committee. This is one of the projects that every Chapter member should subscribe to whole-heartedly. Other Chapters around the country have been writing in to get all the details on the program. If this keeps up, it appears that a majority of the Chapters will be having their own Workshop Programs. Thanks again to the Golden Gate's pioneering of this idea.

I want to thank all the officers, board members, committee chairmen and committeemen for the outstanding services that they have rendered the Chapter during this past year. Due to the fine programs provided by Gus Gendler, our attendance per average meeting has been higher than at any time during the long life of the Chapter.

Again, most humbly, I want to thank everyone for his most generous and sincere assistance.

Please mail your check for Chapter Dues to:
Mr. Ed J. Meehan, Secretary
Golden Gate Chapter, ASHRAE
1371 - 15th Avenue
San Francisco, California

ASHRAE - Golden Gate Chapter MINUTES - April 8, 1965 ENGINEERS CLUB

• President Tom Brewer opened the meeting with introduction of members and guests. There were 79 members and 34 guests.

• A brief report was made by Gus Gendler on the Region X meeting in Vancouver, B.C. on April 1, 2 and 3rd. Some of the subjects discussed were the need for a Research Fund Committee in each Chapter, greater activity on membership cultivation, and recommendations from local Chapters for Honors and Awards.

• Gus Gendler announced that the next meeting will be on School Construction Systems Development with a panel of experts to be announced by Bill Barron in the Fog Dispenser.

• Dick Friedman with the help of several members was very active in securing pledges for the Scholarship program. He reported that as of this evening 58 members had made pledges totaling \$989.00, and that approximately \$200 in cash had been received.

• The June meeting will feature Dean Hayes plus other faculty members from California Polytechnic and it is hoped that our Chapter will be able to present a check of \$500 to the College for our Work-Ship program.

• Larry Shea reported that the Chapter has the Fog Dispenser published by a new printing firm. This has reduced the monthly cost from \$125.00 to \$140.00 to \$52.50.

• Irving Alger and Don McCloud reported that the Weather Data is available and many copies were sold at the meeting.

• Joe Beck announced that the new Rosters have been mailed out.

• Under new business, it was announced that a new Chapter of ASHRAE will be organized at San Jose with the initial meeting to be held at the Holiday Inn on May 10. The regional Chairman, Rod Kirkwood will be the first speaker.

• Bill Barron reported that the ballots have been counted with the results as follows for officers and Board members for 1965-1966.

Gus Gendler - President
Arel Berrier - Vice-President
Larry Shea - Secretary
Bob Voelz - Treasurer

Dick Friedman - Bd of Governors
George Aronovsky - Bd of Governors
Tom Brewer - Bd of Governors

• The Sacramento Chapter has invited the G.G. Chapter members to their annual dance at the El Macero County Club, June 5th. Tickets are \$15.00 per couple.

• Joe Beck introduced the panel of speakers on the subject of Fire Dampers:
Fred Weir - local Consulting M.E.

Clyde Wolters - Mech Eng with S.F. City and County

Seigman Kulka - Mech Eng with Contractor
Bill Pacchetti - State Fire Marshal's office
Frank Saunders - local supplier

• This meeting was one of the most controversial ones in some time due to lack of definitive codes or requirements on exact location of fire dampers in ductwork. There were many questions from Engineers and Contractors and Mr. Pacchetti from the State Fire Marshal's office did a very fine job of trying to define and explain just what is required. He further volunteered his services to anyone seeking answers on Fire Dampers. The meeting was adjourned at 10:00 p.m.

Arel W. Berrier, Secretary

RECOMMENDED OUTDOOR DESIGN TEMPERATURES - NORTHERN CALIFORNIA

The Golden Gate Chapter is happy to announce that the second edition of "Recommended Outdoor Design Temperatures - Northern California" is now available at \$2.00 per copy.

This is one manual that every designer of heating, ventilating and air conditioning projects in Northern California should have.

Please make your checks payable to the Golden Gate Chapter ASHRAE. Mr. Donald McLeod of Simpson, Stratto & Assoc., 325 - 5th St., San Francisco, EX 6-1712 will gladly process your orders.

ASHRAE

SACRAMENTO VALLEY CHAPTER

9th Annual-Spring

DINNER-DANCE

JUNE 5, 1965

SATURDAY

EL MACERO COUNTRY CLUB

(El Encanto Room)

12 mi. W. of Tower Br. on Mace Blvd.

CLYDE MITCHELL'S
ORCHESTRA

COCKTAILS - 7:00 (NO-HOST)

DINNER - 8:00 (PRIME RIB)

DANCING - 9:00 - 1:00

TICKETS
\$15.00 PER COUPLE

ATTENDANCE AT THE MARCH MEETING

MEMBERS

Charles J. Rosenberg
 Herman Bauer
 Duane Hanson
 Jim Lazor
 John Lenihan
 Bob McLean
 Chuck Kopf
 Bill Barron
 Elmer Guy
 John Rhoads
 Earl Jacobs
 John Capitolo
 L. A. Cavagnolo
 Miles Suda
 John E. Werner
 Jim Curtin
 W. H. Olson
 Frank F. Gordon
 Edward Weiss
 John Koop
 Raymond C. Kelly
 Ted. S. Keels
 M. R. Fisher
 Joe Nussbaum
 Ross Sherrill
 Don Locke
 Ed Leedom

Jim Myers
 Tom Douglas
 Al West
 Booth Thomas
 Al Tucker
 Lewis E. Long
 Gene Valerio
 C. L. Arnold
 David Rifkin
 C. H. Bailey
 Ed Akizuki
 Ross Price
 Ken Lloyd
 Fred Vann
 Bob Anderson
 Don Bradshaw
 Lewis Pollock
 Jim Breese
 Richard Emerson
 Don Ribacchi
 Walter Schneider
 Bob Wistort
 Joe Washington
 Jim Booth
 Karl Baldwin
 Rod Roberts
 Ken Oliphant

Sig Kulka
 Jim Van Buskirk
 Sid Copland
 Pete Knezevich
 Tom White
 M. Stuart Stevenson
 Don McLeod
 Clyde Wilson-Reid
 John Brose
 Jack A. Palmer
 Jerry Howarth
 Don Williams

Yanow & Bauer
 Gayner Engr.
 E. B. Ward & Co.
 Burke & Co.
 E. C. Cooley
 Robertshaw
 Wm. Barron Co.
 Emerick Sheet Metal
 Hayes ITT
 East Bay M. U. D.
 Johns Manville
 Westinghouse
 G. L. Gendler & Assoc.
 Trane Co.
 Philco
 G. L. Gendler & Assoc.
 Bentley Engineers
 Fluor Products
 Fluor Products
 Fluor Products
 Owens-Corning Fiberglas
 Worthington A/C
 Mfg. Rep.
 H. H. Robertson
 Farr Co.
 Air Filter Sales &
 Service Co.
 J. L. Myers Co.
 Douglas Insulation
 Colan Heating
 Tuttle & Bailey
 The Brose Co.
 Wagner Elect. Corp.
 E. B. Ward & Co.
 American Blower
 Air Floor Co. of Calif.
 Shell Dev. Co.
 N. S. Wright Co.
 C. M. Bailey Co.
 Barber Colman
 Vann Eng.
 SAWCO Glass Flex
 Fiberglass Eng.
 Trane Co.
 C. A. Gillet Co.
 R. B. Holland Co.
 Erickson-Ribacchi
 Kenward Oliphant
 Boothe Radiant Heat
 Ray Winther Co.
 CB Engineering
 Ramsey & Assoc.
 Montgomery & Roberts
 Kenward S. Oliphant Inc.
 & Acoustical Consultant
 Valley Sheet Metal Co.
 A. O. Smith Corp.
 Brohaw and Murakami
 R. F. MacDonald Co.
 American Blower
 C. B. Engineering
 Simpson, Stratta & Assoc.
 Clyde Equipment Co., Inc.
 The Brose Co.
 California Hydronics
 Kramer Trenton Co.
 Don Williams Eng.

MEMBERS

Bill Kunz
 Bob Tuck
 Irving Alger
 Doug Kerby
 Thos. E. Brewer
 Arel W. Berrier
 Dick Friedman
 Robert Voelz
 Jack Kniveton
 M. F. Clarke
 Gus Gendler
 L. E. Shea
 F. M. Palacios
 Leo Dwyer
 Joe Beck
 Gerry Yaffe
 Don Campbell
 Art Ciapponi
 Richard E. Gee
 Bob Phillips
 Bob Swezey
 Jose Murray
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GOLDEN GATE CHAPTER

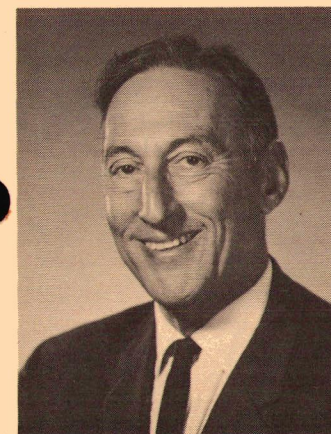


ASHRAE

VOLUME XV No. 4

APRIL 1965

PROGRAM CHAIRMAN: JOE BECK



The next Golden Gate Chapter meeting will be held at the Engineers Club, San Francisco, on Thursday, April 8, 1965. Social hour - 5:30 to 6:30. Dinner promptly at 6:45 P. M.

"Fire Shutters (Dampers) in Air Conditioning Systems"

Mr. Joseph C. Beck is a registered professional engineer in the State of California and is Vice President in Charge of Sales Engineering for the Atlas Heating and Ventilating Company, Ltd.

An authority in the heating, ventilating and air conditioning field with 30 years experience, Mr. Beck will be the moderator for a panel discussion on "Fire Shutters (Dampers) in Air Conditioning Systems".

The "panel" invited to discuss this many-sided problem will cover all aspects of fire dampers, i.e., that of the professional engineer, building department officials, fire department officials, mechanical contractors and material suppliers.

The subject is a complex one especially in view of the numerous regulatory bodies, codes and interpretations in the various areas, particularly as related to their standardization for use in new construction.

In addition a report will be presented on the progress of the joint committee of Sheet Metal Industry Contractors and Mechanical Professional Engineers that was formed in July to study this subject.

APRIL ANGEL
 WM. A. BARRON & CO.

420 Market Street • San Francisco • EX 2-0373

Published monthly by the Golden Gate Chapter of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, 1371 - 15th Avenue, San Francisco, California 94122. LO 6-2740.

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Since the establishment of MEMBER AND NON-MEMBER PRICES, the ASHRAE Circulation Sales Department has received many orders without proper indication as to whether the person making the order is a member or non-member. Thus, there is a time-consuming job in looking up each account so that individuals may be billed at the correct rate.

Also, many orders bear only the name of a company and do not refer to any specific individual. Company orders are billed at non-member prices. All Society members are urged to state that they are members when filling out publication order forms.

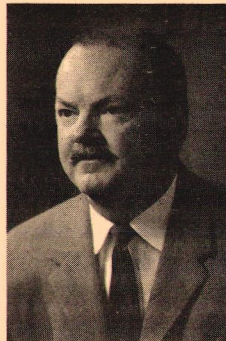
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Mr. Ed J. Meehan
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Golden Gate Chapter ASHRAE
1371 - 15th Avenue
San Francisco, California

President's Corner

Thomas E. Brewer



I had a very enjoyable and interesting luncheon Friday at the St. Francis Hotel's Medallion Room with Miss Julia Szabo from the National headquarters. Miss Szabo was on the West Coast to firm up our July meeting in Portland, and she came on to San Francisco to check out the hotel and meeting room situation here for the 1970 semi-annual meeting.

The Meetings and Arrangements Committee will announce the selection of the headquarters' hotel at the Portland meeting.

In looking back at the Dallas meeting and show in 1960, it was not very long ago, so we are going to have to get going or 1970 will be upon us.

On Tuesday, March 16, along with Tom White, I was privileged to be asked to sit in on an organizational meeting for an ASHRAE chapter in San Jose. With all the enthusiasm shown, it should be a tremendous success. Alex Boome was chosen as Acting Chairman. It will be his responsibility to appoint his various committees and get the membership drive underway so that they may be able to petition the National for a charter. This will require a minimum of 25 members who belong to the National. It is sincerely hoped that this can be done prior to the Portland meeting so that the application for the charter can be presented at that time. Good luck, San Jose! You have the best wishes of the Golden Gate Chapter.

I have been assured by Irving Alger, Chairman of the Weather Data Committee that a revised edition of Weather Data for Northern California will go on sale at the meeting April 8. Don McLeod will be there to take your \$2.00 and let you have your copy. Get there early to avoid the rush.

ASHRAE - Golden Gate Chapter MINUTES - March 4, 1965 ENGINEERS CLUB

President Tom Brewer opened the meeting by having the members and guests introduce themselves from the floor. There were 93 members and 36 guests.

Gus Gendler announced that the next meeting would be a joint panel meeting between the Sheet Metal Contractors and Mechanical Engineers.

Larry Shea indicated that our club was still solvent and able to meet all expenses.

Dick Friedman indicated that he was very disappointed in the response to the Work-shop program and that only \$660.00 had been pledged by 26 members. President Tom Brewer also appealed to the members to support this program.

Irving Alger of the Technical Committee announced that the new Weather Data is in the hands of the printer and should be available at the April meeting. The cost is \$2.00 per copy.

Since there was no old or new business, Gus Gendler announced the speaker, Kenward S. Oliphant whose topic was "The Importance of Noise Control".

Mr. Oliphant maintains two offices, one a mechanical engineering office and the other devoted to noise control. He is a specialist in this field and has made studies for a number of firms.

Mr. Oliphant defined noise as unwanted sound, and that much of it is a by-product of inefficiency. The principle problem he outlined was that few of the architects or engineers give sufficient time or study to noise control in the initial design. Most designs are determined by the economics of construction or installation and the cost of reducing un-wanted noise after completion of a building is several times as expensive than if this problem had been explored in the initial stages.

The un-wanted noises can be reduced or eliminated by pushing them below or above the perception of the human ear on the decibal scale. Often times noise can be reduced by isolating equipment. He gave an illustration of a pipe rigidly held to a wall with the result that the wall will act as a large sound board. He also gave an illustration of a toilet ballcock and outlined that the metal

to bowl connection causes the entire tank to become a sounding panel amplifying the sounds.

Mr. Oliphant spent much time on the subject of isolating the familiar causes of sound, motor noises, pump noises, compressors, etc. All in all, Mr. Oliphant's talk was very interesting, and there was a lively question and answer period.

The meeting was adjourned at 9:45 P.M.

Arel Berrier, Secretary

"Science and Engineering Television Journal"

A series of twenty programs planned to post scientists and engineers as well as the interested layman on the latest developments in these fields, premiered Friday, March 5, at 10:00 p.m. on KQED, Channel 9, the Bay Area's community-sponsored television station. The series is basically designed to close the communications gap between the various scientific and engineering disciplines.

Underwritten by the National Science Foundation and the Timken Roller Bearing Company, the "TV Journal" programs are coordinated by the American Association for the Advancement of Science in cooperation with twenty scientific and engineering societies.

TV Journal Programs and Sponsoring Organizations

Observatories in Space, April 2 - American Astronomical Society; *Seeing Inside Metals*, April 9 - American Society for Metals; *Fiber Optics*, April 16 - Optical Society of America; *Metropolitan Planning and Design*, April 23 - American Society of Civil Engineers; *The Atomic Jungle*, April 30 - American Institute of Physics; *Operations Research*, May 7 - American Institute of Industrial Engineers; *Topology*, May 14 - Conference Board of the Mathematical Sciences; *Traffic Control Techniques*, May 21 - Institute of Electrical and Electronics Engineers; *Conflict Resolution Research*, May 28 - American Psychological Assn.; *Pursuit of Perfection*, June 4 - American Society of Quality Control; *Bio-Medical Engineering*, June 11 - International Federation for Medical Electronics and Biological Engineering; *How to Succeed Without Re-Inventing the Wheel*, June 18 - Engineers Joint Council; *Communication Among Animals*, June 25 - American Institute of Biological Sciences; *Cryogenics*, July 2 - American Institute of Chemical Engineers; *Man-made Weather Modification*, July 9 - American Meteorological Society; *Pest Control*, July 16 - American Association for the Advancement of Science.

ATTENDANCE AT THE FEBRUARY MEETING

MEMBERS

Al Mudica
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 Herman Bauer
 D. R. Dickson
 Bob Swezey
 Peter S. Filios
 Booth Thomas
 Lou Gramaglia
 E. E. Leedom Jr.
 G. E. Siegfried
 Carl H. Jordan
 Orville E. Bloebaum
 Don Bachman
 Charles E. Harden
 Ward Clark
 Allan M. Ballard
 Don McLeod
 Gerry Yoffe
 Gus Gendler
 Robert Voelz
 Dick Friedman
 Alex Boome

Jos. E. Murray
 Lyle Schuelke
 Jack Sprott
 Bill Orton
 John Werner
 Karl F. Tulp
 George N. Aronovsky
 Leo P. T. Destin
 Roy A. Skover
 Ted Georgion
 John Capitolo
 Jim Lazor
 George Kaunoff
 Walt Schneider
 Tom Higashioka
 Howard Friesen
 Gene Valerio
 Miles Suda
 Duane Hansen
 Art Capponi
 Mike Reichlin
 Jim Meyers
 Don Campbell
 Bill Broderick
 Ross M. Sherrill
 Joe Beck
 Ross Chamberland
 T. J. White
 Robert J. Ruth
 Chuck Kopf
 Doug Kerby
 Karl Baldwin
 Chuck McLaughlin

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 The Marley Company
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 Kenward S. Oliphant
 Higosh Assoc.
 Barber Colman Co.
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 G. L. Gendler & Assoc.
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 Pacific Pumping Co.
 Pacific Pumping Co.
 J. L. Meyers Co.
 Trane Co.
 Honeywell
 H. H. Robertson Co.
 Atlas Heating
 Chamberland & Painter
 American Blower
 American Air Filter
 Robert Shaw
 American Standard
 Ramsey & Assoc.
 American Blower

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 Bob Phillips
 Don Locke
 C. H. Bailey
 John Hawks
 Bill Barron
 Clarence Bazille
 R. F. Chesebro
 John A. Lord
 Lewis S. Pollock
 Sig Kulka
 S. Wei
 H. Yahagi
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 Jack Palmer
 W. H. Olsen
 Charles J. Rosenberg
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 Donald Williams
 Pete Knezevich
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GUESTS

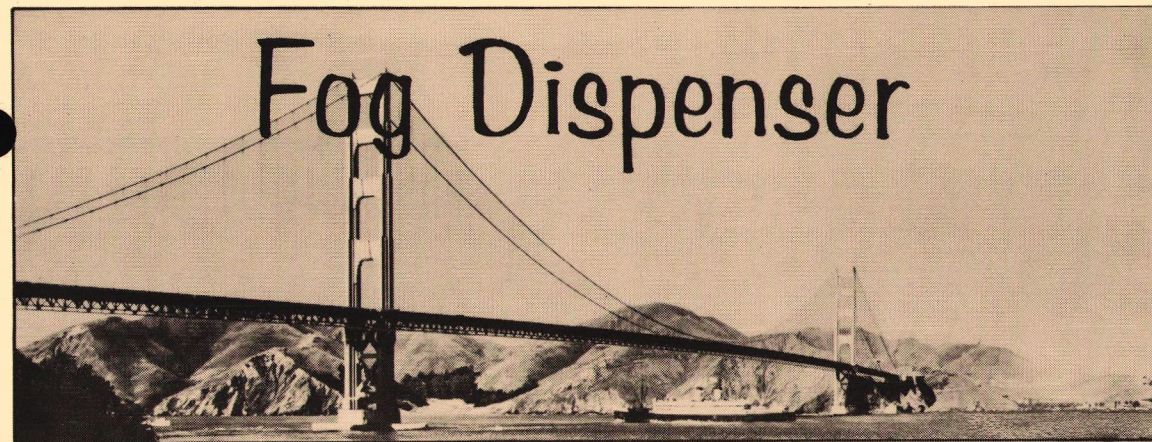
Ruth Girschbach
 Art Bland
 Phil Brown
 Connie Arnold
 Al Tucker
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 Frank Takkon
 Morris Beck
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GOLDEN GATE CHAPTER



ASHRAE

VOLUME XV No. 3

MARCH 1965

COMING ATTRACTIONS

Program Chairman: Kenward S. Oliphant



The next Golden Gate Chapter meeting will be held at the Engineers Club, San Francisco, on Thursday, March 4, 1965. Social Hour – 5:30 to 6:30. Dinner promptly at 6:45 P.M.

"The Importance of Noise Control"

Mr. Kenward S. Oliphant is a registered engineer in the State of California and is an Engineering Consultant in the Acoustical, Mechanical and Electrical fields.

As an authority on noise control and its effects, Mr. Oliphant will discuss "The Importance of Noise Control."

His background in noise control stems from extensive experience in field testing of sound and noise spectrums in overall sound pressure levels and vibration measurements with the principle activities being in architectural Acoustics, Electro-Acoustics and Audio Engineering, Physiological Acoustics, Shock and Vibration Control.

His article "The Importance of Noise Control" appeared in the January 1960 issue of Western Architect and Engineer and he has made noise studies for a number of firms, 155 to be exact.

Mr. Oliphant holds a B.S. Degree in Physics from the University of Oregon and is a graduate of the Stanford University Graduate School – Physics 1946-1947.

FEBRUARY ANGEL

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NEW STANDARDS PROJECTS INITIATED

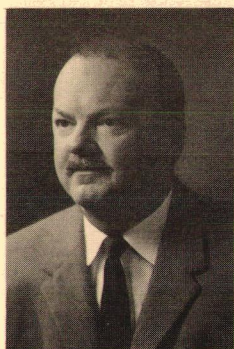
The Standards Committee, at their meeting in Cleveland, authorized the establishment of two new projects covering thermoelectric modules, and a national heating and ventilating code. Both project committees are in the process of formation and will welcome your participation. Please contact the Technical Secretary at ASHRAE Headquarters if you wish to participate in the development of these Standards.

From The Montrealer - AND NOW I ARE WUN!

An engineer is a person who passes as an exacting expert on the basis of being able to turn out with prolific fortitude an infinite series of incomprehensible formulae calculated with micrometric precision from vague assumptions based on debatable figures taken from inconclusive experiments carried out with instruments of problematical accuracy by persons of dubious character and questionable mentality for the avowed purpose of annoying and confounding a hopeless commercial group of esoteric fanatics referred to all too frequently as "practical engineers".

President's Corner

Thomas E. Brewer



It was indeed very gratifying to see so many California people at the Semi-Annual Meeting. Even though the weather was extremely cold, the attendance at the Technical Sessions was very good and the Show seemed to me larger than ever.

Either they are making concrete a little harder or I am getting older; but it took me three afternoons to make the rounds. Believe me, I was tired!

Speaking of shows, we have been assured the show with our Semi-Annual meeting in 1970. It is not too early to start making plans as we want to put on the finest meeting possible and have an outstanding show. A lot of fine people made many concessions to secure this show for us and we do not want under any circumstance to let them down.

I understand that our weather data revision has been put over the hurdles and not found wanting. With a little bit of luck, we will be able to present it at the April meeting.

On April 1st, 2nd and 3rd, Region 10 Meeting will convene in Vancouver, B.C. We would like all members that can possibly make it, be there. So as not to conflict with the April meeting of the Golden Gate Chapter, the April meeting will be held on Thursday, the 8th, at the Engineer's Club the usual time.

CAREER OPPORTUNITIES BOOKLET AVAILABLE FOR STUDENTS

Several months ago, ASHRAE published a revision of its booklet describing career opportunities for prospective technicians and engineers. This booklet is designed primarily for students of junior-high to post high school age, to help them evaluate their interests and talents in preparation for the right career. In a relatively short time, the Society has distributed close to 5,000 of these booklets to students, teachers, guidance counsellors, and libraries.

The 16-page booklet, entitled YOUR FUTURE IN AIR CONDITIONING, HEATING AND REFRIGERATION ENGINEERING, is available at no cost and can be circulated to students and schools in your local areas. Among the chapter headings are WHAT IS AN ENGINEER?; WHY ENGINEERING?; CHOOSING A FIELD; HOW TO PREPARE FOR A CAREER IN ENGINEERING; brief descriptions of AIR CONDITIONING, HEATING, REFRIGERATION AND VENTILATING; OPPORTUNITIES IN THESE FIELDS for both engineers and technicians; APPROVED COLLEGES AND UNIVERSITIES; TECHNICAL INSTITUTES; and SUGGESTED READING.

For copies, write to J.H. Cansdale at ASHRAE Headquarters, United Engineering Center, 345 East 47th St., New York 17, New York.

ASHRAE - Golden Gate Chapter MINUTES - February 4, 1965 ENGINEERS CLUB

The meeting was opened at 7:15 PM by vice-president Gus Gendler in the absence of president Tom Brewer. Members and guests introduced themselves from the floor. The minutes of the previous meeting were dispensed with as they are printed in the Fog Dispenser.

Carl Jordan, attendance chairman, reported that there were 110 members and guests present.

Under old business, Tom White reported that the National Board of Directors had approved the new recommended outdoor design data for Northern California. The nominating committee recommended that the present officers be advanced and that George Aronovsky be added as the new member of the Board.

Dick Friedman circulated additional pledge forms for donations to the Workshop agreement at California Poly and urged everyone to send in their pledges.

Under new business Gus Gendler mentioned the annual Engineers Week banquet to be held on Wednesday, February 24. Those interested in attending should contact Larry Shea.

Gus Gendler mentioned the proposed State Assembly bill No. 76 sponsored by Leroy Greene regarding payment to consultants and sub-contractors within 30 days after the general contractors have received payment.

Tony Melee, executive Secretary of the Sheet Metal Contractors association, discussed the work of the joint committee of Mechanical Contractors and engineers formed one year ago. A new high velocity design duct manual has been prepared and he would appreciate the cooperation of interested parties.

Jerry Jaffee, program chairman, introduced the two guest speakers, both employed by Garrett Corporation, Air Research Division, Mr. James Zimmerman and Robin Mackay, whose topic was Total Energy Systems.

These systems might be better called on-site power. Robin Mackay with the benefit of some interesting slides gave a brief history of this development, which was very popular before 1920. The rapid growth of public and private utilities made individual power generation uneconomic, and this field has been relatively dormant until 1960. The attractiveness of the on-site or total energy system now is of course again, economics, as compared to a conventional heating, air conditioning and electrical system.

One of the types of total energy systems is that where an engine or turbine drives an electrical generator, with the heat rejected from the engine being used for heating, and air conditioning through absorption cooling. Another

type is that where an engine or turbine drives a refrigeration compressor with heat rejected being used for heating or absorption cooling, and also coupled to a standby generator for use in emergencies.

The economic feasibility and limitations were discussed as follows: These systems are not feasible for buildings under 50,000 square feet. The system must be able to use waste heat. A favorable relationship must exist between cost of fuel for prime mover and cost of electricity. The San Francisco area appears to be a potential prospect for the total refrigeration concept rather than total energy. One of the chief limitations of these systems is noise.

A question and answer period followed the presentation and the meeting was adjourned at 10:20 PM.

A. W. Berrier, Secretary

UNIVERSITY OF CALIFORNIA EXTENSION BERKELEY

REVIEW OF MECHANICAL ENGINEERING 899

- DESCRIPTION: This course is concerned with engineering of fundamental thermodynamics, fluid mechanics, economics, and manufacturing processes. Typical mechanical engineering problems and solution methods will be discussed.
- PREREQUISITE: B.S. degree in Mechanical Engineering or equivalent training.
- TEACHER: Mr. Lary M. McGrew, B.S., Department of Engineering, Lawrence Radiation Laboratory, Livermore, Calif.
- PLACE: Room 79, Dwinelle Hall, Berkeley Campus.
- TIME: Mondays, 7-9 p.m., beginning April 19, 1965 and ending July 26, 1965.
- FEE: \$48 for 15 meetings.

Since space may be limited, early enrollment is recommended. For further information or for complete scheduling of all classes write or telephone Engineering Extension, University of California, 2223 Fulton Street, Berkeley, California 94720; THornwall 5-6000, extension 4151.

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Buz Bazille
Karl Baldwin
Roy A. Skover
M. E. Jones
Gerry Yoffe
Jim Lazor
Bob Swezy
Dick Charles
Jim Van Buskirk
Bob Phillips
Jack A. Palmer
Millar F. Clark
Donald L. Williams
Ralph M. Westcott
Gus Gendler
Tom Brewer
L. E. Shea
Robert Voelz

Engr. Air Systems
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Charles & Braun
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Kennedy Engineers
Calif. Hydronics Corp.
Simonson
Donald L. Williams Eng.
Consultant
G.L. Gendler & Assoc.
Calif. Hydronics Corp.
Shea Equipment Co.
Skidmore, Owings, &
Merrill

Dick Friedman
Arel W. Berrier
Ross M. Sherrill
Hi Yahagi
George H. Walker
Al West
Siegmond Kulka
Al Mudico
Ray Herman
Jerry Howarth
Bill Broderick
Joe Washington
Don Campbell
Tom Higashioka
Jim Breese
John Linford

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Bechtel
Kinetuor
Colan Heating
Valley Sheet Metal
Hess, Greiner & Pollard
Western Knapp
Kramer Trenton Co.
Honeywell
Ray Winther Co.
Trane
Higash Associates
C.A. Gillet Co.
Linford Air & Refrig.
Co.

Bob Linford

Linford Air & Refrig.
Co.

Phil Beggs
Chuck Kopf
Doug Kerby
John L. Brose
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Jack Kniveton
A.L. Buonaccorsi
Carl H. Jordan
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G.M. Simonson
Karl Guttman

Paul W. Beggs & Son
Robertshaw
American Standard
The Brose Co.
Vann Engineering
Norman S. Wright
Buonaccorsi & Murray
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G. M. Simonson
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Kasin, Guttman &
Associates

Clyde Wilson Reed
Tom Douglass
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Henry A. Wolfson

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Bill Metcalf
Ray "Giff" Giffard
John W. Potter
Dick Cobb
Jim Dana
Paul R. Nussbaum
Darrell Robinson
Samuel Lam
Steve Wei
Arthur C. Pendergast
Don Ribacchi
Art Von Wronski
Ken Babb

Phil Phillips

Hal Haiger
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Don Wilson
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Howard Bos
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Bert Stubblefield

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A.F.M. Metal Products
A.F.M. Metal Products
Barber Colman
Buonaccorsi & Murray
Johnson Inc.
ITT Reznor-Norman-
Hayes
Eagleson Engineers

Hess, Greiner & Pollard
Retired
Charles & Braun
Charles & Braun
Nibco/Anaconda
G.M. Cooke Co.
P.R. Nussbaum & Co.
Bechtel
Bechtel
Bechtel
Industrial News
Erickson-Ribacchi
Honeywell
Linford Air & Refrig.
Co.
Linford Air & Refrig.
Co.
Buonaccorsi & Murray
Vann Engineering Corp.
Vann Engineering Corp.
Calif. Hydronics
Lockheed

Clyde Equip. Co.
Gustin Bacon
Montgomery & Roberts
American Air Filter
Erickson-Ribacchi Assoc.
Materials Survey Assoc.
Materials Survey Assoc.
ITT General Controls
Custom Aire
Mechanical Design Assoc.
Buonaccorsi & Murray

MEMBERSHIP APPLICATIONS are avail-
able from:

George N. Aronovsky
115 Fairway Drive, Daly City PL5-8464
or Miss Anne Hall VA6-7171
Ed Akizuki UN3-3321
Robert (Bob) H. Tuck 836-4480

or from any of the Chapter Officers



GOLDEN GATE CHAPTER



ASHRAE

VOLUME XV No. 2

FEBRUARY 1965

COMING ATTRACTIONS

Program Chairman: Gerry Yaffe

The next Golden Gate Chapter meeting will be held at the Engineers Club, San Francisco, on Thursday, February 4, 1965. Social Hour- 5:30 to 6:30. Dinner promptly at 6:45 P.M.

"TOTAL ENERGY AND ITS ECONOMIC IMPLICATIONS"

Mr. James J. Zimmerman is energy systems project administrator for The Garrett Corporation's AiResearch Manufacturing Division, Los Angeles. Garrett is the world's leading producer of small gas turbine engines for industrial, commercial and military applications having built 80% of all gas turbines under 1000 hp in use today.

A noted authority on application of natural gas and liquid-fueled gas turbines for on-site power generation Zimmerman will discuss: the elements of the total energy system, its economic implications, and various methods of determining its feasibility in specific applications.

Zimmerman's background in turbine-powered total energy systems stems from extensive experience with several major turbomachinery manufacturers including the positions of sales manager for Rotoflow Corporation and industrial turbomachinery sales manager for Fairchild Engine and Airplane Corporation

He has been with AiResearch for the past year. During this time the company has aggressively penetrated the total energy field with its industrial gas turbines and has proved itself an effective competitor to reciprocating engine systems manufacturers.

Zimmerman holds a BS Degree in Engineering Science from Harvard University and served on active duty as a naval officer during World War II and the Korean Conflict.

FEBRUARY ANGEL

RAY BURNER & BOILER CO.
1301 San Jose Ave.
San Francisco
DE 3-5800

Continued from page 3

10. Henry L. A. Follenfant, Kaiser Engineers, Oakland (Golden Gate)
11. Ray L. Herman, Keller & Gannon, SF (Golden Gate & National)
12. Frank Gorden, Bentley Engineers (Golden Gate & National)

Will You Help Add to this Growing List!

Published monthly by the Golden Gate Chapter of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, 1371 - 15th Avenue, San Francisco, California 94122. LO 6-2740.

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NEW ASHRAE PUBLICATIONS CATALOG ISSUED

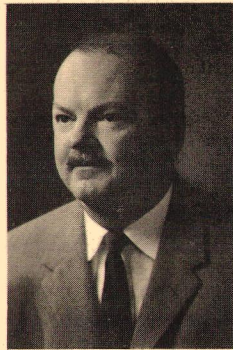
A new comprehensive guide to technical literature published by ASHRAE is now available in an easy-to-use, pocket sized Publications Catalog and Price-list.

Included in the new catalog, just released this month, are reference books, periodicals, standards, charts, abstracts, and bulletins covering every facet of the environmental control field, together with the full information on prices and procedures for ordering. For the first time, prices are listed separately for both members and non-members.

Requests for copies of the ASHRAE Publications Catalog should be sent to: Circulation Sales Department, ASHRAE, 345 East 47th Street, New York, New York 10017.

President's Corner

Thomas E. Brewer



It is very disappointing to me that I will not be present for the February meeting as Gus Gendler has scheduled, which I believe one of the most outstanding meetings the Chapter has ever had "TOTAL ENERGY".

This is a subject that is extremely controversial. It could change our entire concept of thinking where large projects are involved. Although it will require a favorable fuel factor to be right. But this is something I do believe we will see happen in our time. There are several installations in the Southwest and I understand from articles they are very successful.

From inquiries concerning the program that we have been getting, without a doubt we will have a record number at the Engineers' Club. Be sure to get your return card in early for this meeting. This should also be of interest to your electrical engineer. So check and advise him of this program. I do believe this is the first time we are going to need the elevators past the old 10:00 P. M. cut off time.

I have been advised by our Secretary, Mr. Arel Berrier, that Northern California will be well represented at 1965 Show and Convention.

Next month I hope to be able to tell you that we will be having a show along with our 1970 Semi-Annual Meeting in San Francisco. Until then . . . this is 30...

POSITION AVAILABLE

WANTED: Registered Mechanical Engineer - Chief of Section experienced in piping, plumbing, heating, ventilating and air conditioning design, specification and estimating. Contact Mr. Jim Elmendorf, Garretson-Elmendorf-Klein & Reibin, GA 1 - 8188, at 216 Market St. San Francisco.

MINUTES - January 7, 1965

The meeting was opened at 7:15 P.M. by the introduction of members and guests. The minutes of the previous meeting were dispensed with since they are printed in the Fog Dispenser.

President Tom Brewer announced that the wife of member Ed Hill died suddenly from a heart attack and urged members to attend the funeral.

Dick Friedman announced that the original returns on the Work-Ship Fund were encouraging but that he had heard from only about 15% of the membership and urged others to send in their pledge.

Gus Gendler announced that the next meeting will be on Total Energy systems by Mr. Zimmerman of the Garrett Air Research.

A show of hands indicated that eleven members would attend the ASHRAE meeting in Chicago this month, but that none of this number would be consulting engineers.

Carl Jordan announced that there were a total of 110 members and guests at the meeting.

President Tom Brewer announced the appointment of the nominating committee as follows:

Rudy Pribuss - Chairman

Jack Kniveton Dave Burr
Charles Kopf Lewis Long

Don Williams introduced the speaker, Mr. Ralph Wescott of the firm, Holladay and Wescott in Los Angeles. Mr. Wescott introduced his subject, "Can Corrosion and Scale be Prevented", and then answered it by saying "yes, and no".

Mr. Wescott did not spend much time on the theoretical side of this subject, but illustrated his talk by specific examples. Some of the points he made are as follows:

All problems of scale and corrosion or scale cannot be solved by treatment.

Scale correction in some jobs can cause corrosion, and corrosion control can create scale etc.

Many of the problems of scale and corrosion are physical problems due to oversize of pumps, excessive velocity, poor engineering design, etc.

All in all, Mr. Wescott indicated that scale or corrosion control is not at exact science, and that many jobs do not really need any treatment.

The question and answer period indicated a great need in the Northern California area for an expert of Mr. Wescott's ability and knowledge.

The meeting was adjourned at 9:30 P.M.

Arel W. Berrier, Secretary

ENGINEER'S WEEK

During February a week is set aside for recognition and tribute to engineers. It invariably occurs during the week of George Washington's birthday - after all - George WAS an engineer.

On Wednesday, February 24th, a dinner will be held at the Palace Hotel (\$6.00 a head) to celebrate Engineer's Week. During the dinner scholarship awards, totaling \$4200.00 will be given to deserving high school students for their college tuition.

It would be desirable to have as many ASHRAE members as possible join their brother members from other societies at this function - 10 or more people would enable us to a table of our own. Approximately 500 people attend this banquet - the air conditioning facet of engineering should be able to support two or three tables at this affair.

Interested members should contact Larry Shea at DO 2-0740 for tickets and reservations. A noted guest speaker will also be on hand. Lets show the engineering community that there ARE engineers in air conditioning - - by a large turnout.

MEMBERSHIP COMMITTEE

by George N. Aronovsky, Chairman

In spite of the please, the response to the NEW MEMBERSHIP drive has been poor indeed compared to the application forms issued. Will those who have received the application forms for membership kindly take the time to execute them & mail to the undersigned! Will the members who sponsor guests take the initiative to urge guests or prospective members to join for the benefit of all! We all will be doing ourselves a favor. No drive can be truly successful without volunteer work on the part of the Membership. The effectiveness of the drive is in direct proportion to the enthusiasm and effort of its members. Again may I say that when you introduce a new member to the Society, you do him and the organization a great service. We are in constant need of informed, qualified and competent people.

In line with our new procedure, we are adding to the previous listing of newly joined members which I know the membership will make most welcome.

The following are the names

- Booth Thomas, Tuttle & Bailey, SF. (Golden Gate & National)
- Edward Weiss, Fluor Products, Santa Rosa (Golden Gate & National)
- Orville E. Bloebaum, The Marley Co., Millbrae (Golden Gate)

Continued on page 4.

ATTENDANCE AT THE DECEMBER MEETING

MEMBERS

Pete Pilius
 Bob Tuck
 Donald Locke
 Ross Sherrill
 "Connie" Arnold
 M. Riffle
 George Aronofsky
 L. Gramaglia
 G. E. Siegfried
 A. L. Mudico
 Jack Howe
 A. Reid Chappell
 E. C. Leedom
 John Hawks
 Bill Cooley
 M. L. Clarke
 Ted Georgiou
 Bill Orton
 John Linford
 Howard R. Friesen
 P. T. Leon Destin
 J. M. Nussbaum
 Bob Wistort
 Chuck McLaughlin
 Don H. Huffins
 Don Ralston
 Bob Sharp
 Dave Coles
 R. C. "Bud" Kelly
 John Koop
 M. Stuart Stevenson
 Charles E. Harden
 Bob Anderson
 Robert Voelz
 Leo Dwyer
 Jim Van Buskerk
 John E. Werner
 Ward Clark
 Irving Alger
 Sid Kulko
 Gene Valerio
 Bob Phillips
 Phil Beggs
 Bill Banon
 Duane M. Hansen
 Lewis S. Pollock
 D. R. Dukson

MEMBERS

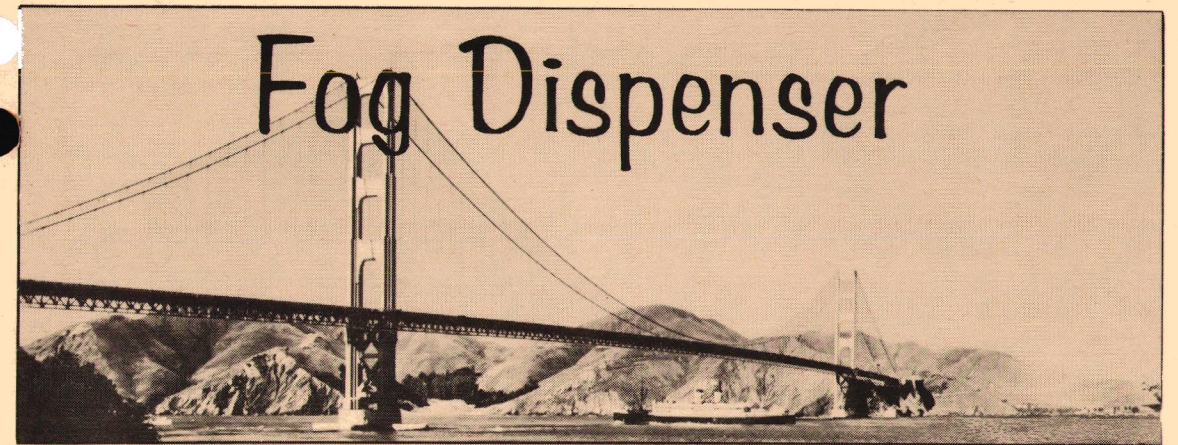
Tom Douglass
 Ted Skeels
 Bob Jackson
 Jim Booth
 Ken Mirov
 Hal Bessell
 Bob Boyer
 John Brose
 Tom Gilbertson
 Per Sonander
 Richard Emerson
 Miles Sudo
 Pete Knezevich
 Art Ciapponi
 Clyde Wilson Reid
 Tom Higashioka
 Joe Schauf
 Ben Tipay
 Jack Sprott
 Leo Rothe
 Mark Fisher
 Walter H. Schneder
 Jos. E. Murray
 Ray Wolford
 Charles Rosenberg
 B. K. Tow
 Earl Jacobs
 Lewis Long
 O. E. Bloebaum
 Fred Vann
 Jim Curtin
 Carl H. Jordon
 Don Campbell
 Robert H. Braun
 Karl T. Tulp
 Ed Collins
 Jack Kniveton
 Dick Freidman
 Larry Shea
 Gus Gendler
 Dick Charles
 Mike Reichlin
 Walt Ruxton
 Wallace MacLean
 K. Guttman
 A. Ballard
 W. H. Olson
 Bob McLean

GUESTS

Ed Akezuki
 Don Kirtley
 Bill Hwist
 Chuck Kopf
 Tom White
 Joe Beck
 Ken Lloyd
 Ed Dailey
 J. C. Eckels
 Ed. Weis
 W. E. Wallis
 Pat Geis
 G. Mines
 Terry O'Leary
 Handy Feiner
 Dick Hamilton
 Bob Fleming
 Robert M. Meechan
 Chad Clark
 Gunter Schlicht
 Walt Ruxton
 Al Dabbach
 Dick Fudedka
 Ray Nerman
 Sloe Ginn
 Duj Ginn
 Bill Meyer
 Wm M. Crozer
 Bruce D. Steinwinter
 Arthur Bland
 Lyle Schulke
 R. G. Boyer
 Dan Marelich
 Earl Evans
 A. C. Falkensten
 Sam Tamaviki
 Carson Woo
 Torg Ramseyer
 Dan Kramer
 Art Von Wronski
 Richard Scheumert

Please direct your letters to:

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GOLDEN GATE CHAPTER



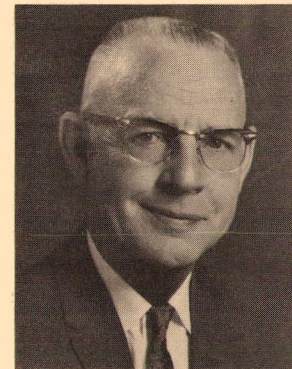
ASHRAE

VOLUME XV No. 1

JANUARY 1965

COMING ATTRACTIONS

Program Chairman: Don Williams



The next Golden Gate Chapter meeting will be held at the Engineers Club, San Francisco, on Thursday, January 7, 1965. Social Hour - 5:30 to 6:30. Dinner promptly at 6:45 P.M.

"Can Corrosion and Scale Be Prevented?"

Ralph M. Westcott, Consulting Engineer, on leave of absence from Holladay & Westcott, Los Angeles, to serve as Executive Director of the Consulting Engineers Association of California. With 25 years experience on water problems, Mr. Westcott will discuss specific examples of scale and corrosion problems of both the usual and unusual types.

He joined ASRE in 1941 and served as Los Angeles Section Chairman in 1947, Section Director from 1946 to 1952, and Regional Director from 1955 to 1958. He is now a Fellow of ASHRAE.

In addition, Mr. Westcott is a two term Past President of CEAC, and Past National President of Consulting Engineers Council. Director of Los Angeles Chamber of Commerce from 1961 to 1964 and member of the United States Chamber of Commerce Committee on Government Operations and Expenditures. Awarded Engineer of the Year by Consulting Engineers Association of Washington in 1960. Registered Engineer in California and Nevada.

Author of a number of articles on water treatment and professional responsibilities. Member of ASHRAE, AWWA, NACE, ASME, AICE, CEAC, and panel of arbitrators American Arbitration Association.

JANUARY ANGEL

RAY WINTHER COMPANY

925 Linden Avenue
 South San Francisco
 Phone JU 6-3311

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MINUTES - DECEMBER 3, 1964

The meeting was held at the Engineers Club in San Francisco with 147 members and guests in attendance.

At 7:40 P. M. the introductions of members and guests were given. At 7:52 P.M. the meeting commenced.

The President called for committee reports from Carl Jordan, attendance; Larry Shea, finances; George Aronovsky, membership; all of whom gave brief reports.

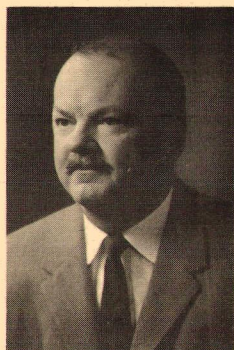
Joe Beck of the Roster Committee stated that there are approximately 40 members who have not paid dues and that they must be contacted and their dues in within the next week or so, otherwise they would not appear on the roster. In addition, new members cannot be certified until dues have been paid.

Dick Freidman, Educational Chairman, gave a brief report on the "Work-Ship" program and stated that our objective was \$1,500.00 in Work-Ships per year. He foresees no problems based upon the returns received to date. He requested

(Continued on following page)

President's Corner

Thomas E. Brewer



We are starting a new year with a list of achievements that is going to make it difficult for the Chapter to equal in the future.

The attendance figures per meeting for 1964 were the largest that the Chapter has ever had. At the joint meeting in Sacramento, the Chapter turn-out was the largest ever. At the December meeting, with Rod Kirk-

wood as speaker, we were pushing 150 members and guests.

The program chairmen in the future are going to have rough going to make up with programs of the caliber that Gus Gendler has provided to date. Keep up the good work, Gus.

I have been informed by the Meeting and Arrangements Committee that the Board of Directors' motion #30 of October 9, 1964, moved to accept the invitation of the Golden Gate Chapter to hold the Semi-Annual Meeting of the ASHRAE in San Francisco in the winter of 1970. There is an excellent possibility that we will have a Show running simultaneously with this Meeting. As we all know, this has been a long-sought Chapter goal. A lot of work and effort by everyone has gone into this.

In doing a little calculation, I figure that Dick Friedman, with a little bit of luck with the nominating committee and the Chapter members, will be present at that time. I would suggest, Dick, that it is not too early to start planning and setting up committees, as we all want everything to go off without a hitch.

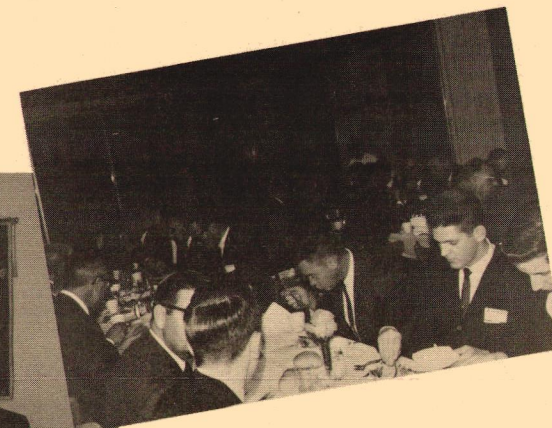
With the coming Meeting and Show in Chicago the week of January 25, it would be well for those who are attending to advise the secretary, Mr. Arel Berrier, so that he may prepare a list and take it back with him for later reference as to who is there and where they are staying. He can be reached at Market 1-7417. I am looking forward to seeing as many of you as can possibly make it to Chicago, as I understand the number of papers to be read, and their quality, is outstanding.

See all of you in January.

POSITION AVAILABLE

WANTED: Heating, Ventilating, Air Conditioning and Plumbing Mechanical Engineers, Designers and Draftsmen - with minimum 3 years experience. Contact Mr. Karl Guttman, Kasin, Guttman & Associates, YU 2-0956, at 111 New Montgomery Street, San Francisco 5.

NOVEMBER JOINT MEETING WITH THE SACRAMENTO CHAPTER



MINUTES (Continued)

that members be expeditious in returning their pledges for this program.

There being no further business, the official meeting was over at 8:00 P. M.

At 8:15 P.M. the meeting was again called to order and Dick Charles, Program Chairman, introduced the guest speaker, Mr. Rod Kirkwood of John Graham & Associates in Seattle.

Before launching into his subject for the evening, "Noise Problems Of Mechanical Systems", he briefly described his functions as Region X Chairman. He describes that he attends local meetings for the president. He invited us to attend the Regional Meeting from

April 1 - 3 in Vancouver, B.C., and reminded us that the Summer Annual Meeting would be in Portland, Oregon. He asked us to attend both functions. He went on to describe that the Society is a democratic organization and that the members, themselves, run the society. He explained the mechanics of getting National action on Local Chapter origin of ideas. He gave examples of revisions to the Guide, or Chapter operations as an example.

He then launched into his subject for the evening (see other report). Lively question and answer periods went on during the discussion and the meeting was officially adjourned at 10:20 P.M.

Respectfully submitted,
By L. E. Shea
For Arel Berrier - Secretary