

FOG DISPENSER

Golden Gate Chapter



ASHRAE

VOLUME XXXVIII - NUMBER 5

FEBRUARY 2000

Thursday, February 3, 2000

**Dawn of the Hydrogen Age
Guest Speaker: Jacques Leslie**

Location: World Trade Club
World Trade Center, #300
(in the Ferry Building)
San Francisco

Date: Thursday, February 3rd, 2000

Time: 5:30pm	Registration
6:30pm	Dinner
8:00pm	Program
9:00pm	Meeting Adjournment

Cost: \$35.00 Members and Guests

All reservations must be received by Edgar De Guzman at edeguzman@accoair.com or fax to 650/594-4915, by Monday, January 31st.

If you need to cancel, please do so by Tuesday, February 1st

Valet parking is available on the north side of the Ferry Building.

After decades of unfulfilled promise, the momentum of fuel cell technology is now so great that its emergence as a predominant technology appears just short of inevitable. During the '90s, nearly every major car manufacturer in the world launched a program to build a fuel cell automobile. Among them was Daimler-Chrysler, which announced its intention to produce 100,000 fuel cell car engines a year beginning in 2005. Many people believe that these developments are the beginning of an era in which hydrogen becomes our predominant fuel, both for transportation and stationary power. If that happens, it is possible to envision an epoch of clean, sustainable fuel and a drastic decline in air pollution, oil spills, acid rain, and greenhouse-gas emissions. In this month's meeting's Mr. Leslie will address many of the technological and social ramifications of fuel cell technology.

Jacques Leslie - Biography

As a Los Angeles Times correspondent in the 1970s, Mr. Leslie was stationed successively in Saigon, Phnom Penh, Washington, D.C., New Delhi, Madrid, and Hong Kong. During that time the Times twice nominated him for a Pulitzer Prize, and he won two national awards, the Sigma Delta Chi Distinguished Service award for foreign correspondence and an Overseas Press Club citation. In 1973, he became the first American journalist to enter and write from Vietcong territory in South Vietnam. While covering the Indochina war, he was wounded once, tear gassed twice, shelled repeatedly, and expelled from South Vietnam after writing a story about South Vietnamese generals' involvement in smuggling brass artillery shell canisters out of the country.

His book, *The Mark: A War Correspondent's Memoir of Vietnam and Cambodia*, was published by Four Walls Eight Windows in 1995. It received many glowing reviews, and Project Censored named it one of the "top censored books" of 1995.

He has written personal essays, investigative pieces, profiles, and humor for *The Atlantic*, *The New York Times Magazine*, *Newsweek*, *Mother Jones*, the *Washington Monthly*, *Parenting*, *Penthouse*, the *Los Angeles Times Magazine*, *Modern Maturity*, *Salon*, *Byte*, and many other publications. This year his literary writing won an Individual Artist's grant from the Marin Arts Council here in California. He is now at work on a piece for *Harper's Magazine* on global water scarcity.

He has been a Contributing Writer at *Wired* since the magazine's inception in 1993. For *Wired*, he has written on hydrogen power, electric cars, the Great Ice Storm of January 1998, technology in Cambodia, and a half-dozen other topics.

Kent Lim Announces Retirement from the Board

The upside of our vibrant economy is that most of us have an abundance of work. This is the downside as well. With all the work there is scant little time for our families let alone our volunteer work. After four years of dedicated service, Kent Lim announced his retirement from the Board at our last meeting. The Board wishes him well and look forward to welcoming him back when (and if) things calm down. In addition to his service on the board Kent has been a generous contributor to ASHRAE Research. Kent, we thank you for all of your support.

*Respectfully Submitted,
Mark Hydeman, Chapter President*

Nominating Committee Deliberates on Slate of Candidates

Mike Scofield, Dan Reiter and Jim Nemechek met on January 13th, to make an initial slate of candidates for next year's Board of Directors. With Kent's resignation they have two vacancies to fill for next year. The Nominating Committee wants and needs your input. Feel free to call any of them to make a recommendation. Their initial slate of candidates will be announced at the February 3rd Chapter Meeting. It will also be published in the March Fog Dispenser. At the March 2nd Chapter Meeting we will ratify the slate of candidates. During the March meeting, any Member in good standing can bring an additional candidate to the floor for any office except that of the President (which will be filled by our illustrious President-Elect, Ben Sun). In addition any member may bring a name to the floor by presenting it in writing to the acting Secretary, Joe Olivier, prior to the March meeting. If a name is brought to the floor and a majority of members vote for it the name will be added to the official ballot. This official ballot will be published in the April Fog Dispenser and on the chapter website. Please take the time to fill it in and return it to Joe Olivier, the acting Secretary. All of the ballots received before or at the April meeting will be tallied and next year's Board will be announced at the April 6th meeting. All of this is detailed in Section 7 of our chapter's Bylaws. Copies of the Bylaws are published in our Roster each year, and can be found on the website at http://www.ggashrae.org/by_laws.htm. If you have any questions about the process feel free to contact a member of your Board.

*Respectfully Submitted,
Mark Hydeman, Chapter President*



Ode To The New Year

*"Ob-la-di, ob-la-da,
Life goes on, bra
La la how the life goes on..."*

Lennon/McCartney, Ob-La-Di, Ob-La-Da

By virtue of the fact that you can read this column we have survived the dreaded Y2K transition. My family and I spent New Years Eve watching the fairy penguins come ashore on Kangaroo Island in South Australia. The adults spend their days at sea feasting on fish (and dodging the predators from above and below). Only under the protection of night do they make their way up the steep cliffs to their burrows tucked away in low thorny bushes. The return of the adult penguins, a daily ritual goes something like this:

At twilight the young penguins emerge from the nest in anticipation of the return of their parents. Shortly after sunset there is raucous noise from the sea, it starts faint and slowly grows to a din. One by one adult penguins appear on the cliffs having braved the surf breaking on boulders, the treacherous climb (waddle) up the cliff and whatever predators await them on the ground. Caught for a moment in our torches they freeze believing that by standing still they are invisible (actually they appear quite ridiculous: tiny, erect, frozen in their tracks, completely incongruous with the surroundings and a look of total innocence on their faces. At four in the morning the cacophony starts again as they head out to sea.

Set against this daily struggle for survival (a routine that occurs every day no matter what the day) the human occupants of the island were doing the best to endanger their own survival: enjoying the Millennium by drinking wildly, racing up and down the road in their trucks (back and forth, back and forth) and lighting off fireworks. We retired to our room to sip champagne and wait for the real thrill of the evening, awaiting midnight to see if the lights and TV signal survive the New Year. After noting that we had survived the dreaded event, we snuggled into our beds. The next morning I walked to the corner store where the proprietor was repeating her daily ritual of washing the counters and making the coffee. "Much ado about nothing," she quipped as she topped off my coffee cup. The turn of the millennium was an experience, but I am more likely to cherish the memories of the comical fairy penguins and watching my six year old daughter encounter turtles and manta rays while snorkeling on Ningaloo reef. What drove us to dive willingly into shark infested waters armed only with our swimsuits? The sharks' hunger was sated with the abundance of fish, but our curiosities were far from full. Bobbing on the surface exposed to the wedgetailed eagles above and the sharks below we looked around in wonder feasting on the vision of tropical fish, coral and the sea. Like the fairy penguins we returned home in the evening to waddle to our beds.

*"This is the way the world ends
This is the way the world ends
This is the way the world ends
Not with a bang but a whimper"*
– TS Elliot, The Hollow Men

**Respectfully Submitted,
Mark Hydeman, Chapter President**

1999/2000 Committee Chairs

How do you turn a 20 hour task into a 10 hour task? Simple, you split the load between volunteers. These committees serve you the members, and we need your help to do the work. Contact a committee chair and offer your services or contact a Board member to fill a vacancy.

Title	Name	Company	Phone	Email
Region X DRC	Kent Peterson	P2S Engineering, Inc.	562-497-2999	kwp@p2seng.com
President	Mark Hydeman	Taylor Engineering	510-749-9135	mhydeman@taylor-engineering.com
President-Elect/CRC Delegate/Chapter Programs	Benjamin Sun	Flack & Kurtz	415-398-3833	bpsun@sf.fk.com
Treasurer	Joseph Olivier	ESS Engineering	415-296-9760	jro@essinc.com
Secretary/CRC Alternate	Kent Lim	Kent Man Lim & Company	415-822-1232	
Board of Governors/PAOE Chair	Ernie French	Norman Wright Equipment Corp	415-467-7600	efrench@norman-wright.com
Board of Governors	Edgardo De Guzman	Acco Inc	650-594-0182	edeguzman@accoair.com
Board of Governors/Roster Committee Chair	Robert Levi	Carrier Corporation	510-563-5713	robert.f.levi@carrier.utc.com
Membership Promotion Committee Chair	Ronald Eng	Carrier Corp	510-563-5701	ronald.eng@carrier.utc.com
Student Activities Committee Chair	Robin James	Belimo Aircontrols	707-745-5998	rjames@belimo.com
Historian	L L Gifford	PCL Construction Services Inc	213-747-0734	
Refrigeration Committee Chair	Glenn Friedman	Taylor Engineering	510-749-9135	gfriedman@taylor-engineering.com
Research Promotion/ Honor Roll/ Product Show	Cory Palmer	Norman Wright Equipment Corp	415-467-7600	cpalmer@norman-wright.com
Technical, Energy & Government Activities Committee Chair	Gary Margadant		707-257-3351	gasm@napanet.net
Newsletter Editor	Debra Marshall	Paco Pumps	510-639-3200	dmarshall@flow-products.com
Honors and Awards Chair	Gail Brager	University of California	510-642-1696	gbrager@socrates.berkeley.edu
Website Chair	Robert Marcial	University of California CEDR	510-849-9057	rmarcial@uclink4.berkeley.edu
Database Chair	Allan Daly	Ove Arup & Partners California	415-957-9445	allan.daly@arup.com

Codes Committee Chair	Dick Glumac	Glumac & Associates	415-421-1164	
Attendance Committee Chair	Richard Charles	C & B Consulting Engineers	415-442-0110	rac@cbengineers.com
Auditing Committee Chair	TBD Vacant			
Tennis Committee Chair	TBD Vacant			
BAEC Committee Chair	Thomas Reinarts	Keller & Gannon	415-621-1199	tom.reinarts@keller-gannon.com
Golf Committee Chair	Charlene Sturm	Air Treatment Corp.	510-655-3990	
Marbles Game Committee Chair	Leslie Hanohano	Norman Wright Equipment Corp	415-467-7600	lhanohano@norman-wright.com
Publicity Committee Chair	Mike Scofield	Conservation Mechanical Systems	707-829-2080	cmscofield@aol.com
Reception Committee Chair (Membership Vice Chair)	Jeff Dittman	Glumac International	415-398-7667	j.dittman@glumac-sf.com
Redwood Empire Section President	Patrick Bailey	Geopraxis Inc	707-996-9408	pbailey@geopraxis.com
Seminar Committee Chair	Luek Vaneveld	Taylor Engineering	510-749-9135	lvaneveld@taylor_engineering.com
Weather Data Committee	Nenad Saric	ATI Engineering Services	925-648-8800	nsaric@atiengineering.com
Golf Co-Chair (next year's chair)	Robert Polizzi	California Hydronics Corp	510-293-1993	bpolizzi@calhydro.com

Have you moved?

Members, please help us keep track of you. If you have recently changed your address, phone, fax or email, please make sure that Society's database is up to date. Call 1-800-5-ASHRAE or change information on Society's website at <http://www.ashrae.org/>. If you want to make changes on-line follow these steps:

- 1) Click on "Membership Records" under the "Members-Only Section" (note you will need your membership # and pin which are on your membership card).
- 2) Click on "Address Change"
- 3) Enter your Name, Membership#, EMail Address and any changed contact information
- 4) Click on submit

Minutes for the January Chapter Meeting

Ben Sun, acting President, called the meeting to order at 12:00

There were 61 Attendees, and they performed self introductions

The meeting minutes for the last meeting were approved as published in the Fog Dispenser

The Nominating Committee was approved. It consists of Jim Nemecheck, Dan Reiter, and Mike Scofield.

The February meeting's topic will be "Hydrogen Fuel in your Future". A noted free lance journalist will talk to us about fuel cells. The meeting will be at the World Trade Club February 3, 2000 with happy hour starting at 5:30pm.

Bob Levy announced the winners of the prime roster non ad spots. They were Trane, PACO Pumps, and Belimo.

Cory Palmer suggested donating your stash of Y2K cash to ASHRAE Research.

No one won the marble game.

Summary of presentation:

Jim Hill, of NIST's Building Environment Division, spoke about the "LEED" program – Leadership in Environmental and Energy Design. It is a proposed rating system for buildings to encourage better and more efficient design.

Dr. Hill gave an excellent introduction to the history and efforts of NIST, much of which has resulted in Public Domain software that can help designers make efficient decisions. Current NIST research projects include photovoltaics, IAQ, and work on the new refrigerants.

For the LEED program, designers self-certify their design's adherence to guidelines in 5 areas: Site planning, water conservation, materials conservation, energy efficiency, and the interior environment. This rating system results in a Platinum, Gold, Silver, or Bronze award for the site.

The audience paid rapt attention to the excellent presentation.

*Respectfully Submitted,
Joe Olivier, Treasurer*

Employment Opportunities:

Supersymmetry is a "green" engineering firm, specializing in energy efficient HVAC systems for the high tech industry. We work primarily on cleanroom and commercial building HVAC systems. Our clients include Netscape, STMicroelectronics, AMD, Hyatt Hotels, Lawrence Berkeley Labs, Applied Materials and Zilog Semiconductors. We are seeking a full time engineer to work on energy monitoring, HVAC design, and energy efficiency projects for high tech companies in Silicon Valley and around the US. An engineering degree and experience designing HVAC systems are required. Experience with energy efficiency is highly desirable. Applicants must be eager to work in a small, informal office with other dedicated and environmentally-minded engineers.

Email resumes to Peter Rumsey at prumsey@supersym.com.

PG&E's Continuing Education in Energy:

February 2000 and early March 2000 PEC Classes and Evening Lectures

- The Pacific Energy Center is located at 851 Howard Street between 4th and 5th Streets in San Francisco. We're a block from Moscone Convention Center. There is a parking lot between 4th and 5th Streets on Mission Street, a block away.

To reserve a space in these free events, call 415-973-7268 or register online via the PEC Web site: www.pge.com/pec.

*Motor Master+ Workshop, Tuesday, February 8,
9:00 a.m. to 3:00 p.m.*

We will demonstrate Motor Master+, software that informs motor inventory management, repair, and purchasing decisions. We will also showcase a recently developed motor performance analysis tool that captures real time power data and facilitates the evaluation of motor efficiency, loading/sizing, and life cycle savings using MM+.

*Lighting Fundamentals, Tuesday, February 8,
9:00 a.m. to 4:30 p.m.*

OR

Wednesday, February 9, 9:00 a.m. to 4:30 p.m.

With the aid of demonstrations in the lighting classroom, participants will learn concepts, including terminology, light and color theory, electric light sources, luminaires, controls, calculations, and economics.

*Title 24: Changes in Lighting Standards, Thursday,
February 17, 9:00 a.m. to 3:00 p.m.*

Learn how newly revised Title 24 energy standards affect the work of lighting professionals. We will present a design challenge and develop a solution matrix for combining good lighting design and code compliance. Class developed and taught by members of the Illuminating Engineering Society, Golden Gate Section.

*Hydronic Radiant Heating and Cooling for Engineers,
Wednesday, February 23, 9:00 a.m. to 4:30 p.m.*

Learn the fundamentals of engineering a radiant heating and cooling system. We will cover basic hydronic design issues and how to select and size a system.

*Integrated Building Design, Tuesday, February 29,
6:00 p.m. to 9:00 p.m.*

Discover how choices regarding external shading, building skin, daylighting, electric lighting, glazing, structural systems, and HVAC systems can be integrated in your design to create comfortable and energy-efficient indoor environments.

*Lighting for the Elderly and Visually Impaired,
Thursday, March 2, 9:00 a.m. to 4:30 p.m.*

The elderly and persons with visual impairments have special lighting needs. We will cover design considerations for achieving safe and comfortable lighted environments for partially sighted individuals.

*Whole Building Energy Benchmarking: Applications
and Techniques, Tuesday, March 7,
9:00 a.m. to 4:30 p.m.*

Whole-building energy benchmarking is a critical part of the process whereby energy service companies and facility managers choose which energy retrofits to pursue. This program will cover the tools and techniques available to assist in developing benchmarks.

*Commissioning of HVAC Systems and Equipment,
Thursday, March 9, 9:00 a.m. to 4:30 p.m.*

Commissioning of new and existing building energy systems has become increasingly popular and economical. We will discuss the latest tools and techniques used to commission HVAC systems and equipment.

*American Society of Heating, Refrigerating and Air-
Conditioning Engineers
(ASHRAE)--Golden Gate Chapter*

*Energy-Efficiency Opportunities in Chilled Water
Plant Design, Wednesday,
March 29, 9:00 a.m. to 4:30 p.m.
(\$150 course fee includes lunch)*

Learn the latest tools and techniques in designing energy-efficient chilled water plants. Instructors will include members of the CoolTools(tm) Chilled Water Plant Design Guide development team*Steve Taylor and Mark Hydeman of Taylor Engineering and Paul DuPont of DuPont and Dobbs. For more information and to register, contact Loek Vaneveld by phone at 510-749-9135 or email at lvaneveld@taylor-engineering.com.

The class below will be developed by Pacific Energy Center staff and taught at the Stockton Training Center, 1129 Enterprise Street, Stockton, California. To register, call 1-800-244-9912 or email Karen Lynch at kml2@pge.com.

Data Collection for Packaged Units
Tuesday, February 1, 9:00 a.m. to 4:30 p.m.

We will examine the energy-saving opportunities available for diagnosing and retrofitting packaged HVAC units. Measurement methods presented will include the evaluation of economizers, compressor cycling, and evaporative cooling performance.

Product Show

The 1999-2000 Product Show will be April 6 at the Pacific Energy Center. Our ASHRAE Chapter and the San Francisco Chapter of The American Society of Plumbing Engineers (ASPE) will both participate in the Product Show this year. Because the two Societies have some members in common, we will hopefully increase the turnout and participation in the Show by working with ASPE. Letters explaining the registration process and cost of exhibiting will be sent in February. For more information on the Product Show, contact Cory Palmer at 415-467-7600, ext. 111. The ASPE contact is Mike Marshall, phone 925-933-8400, ext. 132.

ASHRAE Research:

Contact Cory Palmer with suggestions or contact information for possible corporate ASHRAE Research contributions.

The minimum investment level for personal Research Honor Roll is \$100 and \$150 for a corporate contribution. Thanks to the following new Honor Roll contributors:

INDIVIDIAL

James McDonald
Ron Yaffe
Bernie Beckius

CORPORATE/GROUP

Paragon Controls Inc.
Golden Gate ASHRAE Chapter
Gerald Yaffe Associates

Checks to ASHRAE Research should be mailed to:

Cory Palmer
c/o Norman Wright Mechanical Equipment Company
99A South Hill Drive
Brisbane, CA 94005
415.467.7600 phone / 415.467.0900 fax

Do You Want to do Some Valuable Work for the Golden Gate Chapter of ASHRAE??

We're still looking for a volunteer to edit the Fog Dispenser. I've really enjoyed the past few years, getting the preview information, hounding the board members for information, etc. It takes only a few hours each month, and is a valuable contribution to the members of ASHRAE and the Chapter.

If you are interested in doing a little creative designing, putting your Thesaurus to work and spell checking other contributions give Mark Hydeman a call. He'll be most anxious to talk to you!

Upcoming Programs:

Month	Program
February 3, 2000 World Trade Club	Dawn of the Hydrogen Jacques Leslie
March 2, 2000 World Trade Club	VAV Systems for Improved Comfort and Air Quality
April 6, 2000 PG&E Energy Center	Product Show
May, 2000	Field Trip - Monterey Bay Aquarium
June 1, 2000	To Be Determined

Give Us A Call, Our Complete Sales, Engineering Design
and Service Capabilities Make A Difference



R.E. MacDonald Co.

SERVING YOU SINCE 1956

25920 Eden Landing Road • Hayward, CA 94545-3816 • 510/784-0110 • FAX 510/784-1004

Visit our website at www.rfmacdonald.com

BOILERS • PUMPS • METERS • PARTS • SERVICE • SALES