SAN FRANCISCO SECTION
THE AMERICAN SOCIETY
OF MECHANICAL ENGINEERS

SEPTEMBER 1978 NEWSLETTER RAY RAHN 415/781-4211, Ext. 1896 Editor

SEPTEMBER MEETING

DATE ..... September 21, 1978.
PLACE ..... Schroeder's Cafe
240 Front Street
San Francisco
TIME ..... No-Host Cocktails — 5:30 - 7:00 P.M.
Dinner — 7:00 - 8:00 P.M.
Program — 8:00 - 9:30 P.M.
MENU ..... *CHOICE OF:*
A) Sauerbrauten at $5.25 per serving.
B) Wiernerschnitzel at $5.60 per serving.
C) Baked Chicken, German Style at $4.50 per serving.

ABOVE PLUS:
$.40 coffee
plus sales tax
$.90 tip per serving

Extras will be desert or other beverages.

PROGRAM ..... "EARTHQUAKES, *WHOSE FAULT?*"
SPEAKER ..... Karen M. Ward
Office of Earthquake Studies
U.S. Geological Survey.

Karen M. Ward is a seismologist who has worked at the Office of Earthquake Studies of the U.S. Geological Survey for the past four years. Her particular areas of interest include the seismicity of the Imperial Valley in Southern California, and dam-induced seismicity. She received an Outstanding Performance Award for her work on the Oroville earthquake sequence of 1975, and was selected to speak on that topic to a visiting delegation from the People's Republic of China.

Ms. Ward will present a talk accompanied by slides which will discuss the mechanics of earthquakes, hazards present to us as a consequence of earthquakes, and the state of the art of earthquake prediction.

RESERVATIONS AND MEAL CHOICE: Phone: 635-4742.

TENTATIVE SAN FRANCISCO ASME MEETING SCHEDULE 78-79:

TOPIC	*MONTH*
BERKELEY LABORATORY TOUR — A tour of ongoing research at U.C.B. in the Mechanical Engineering Department	October 19
U.F.O.'s — Discussion of findings relating to natural phenomena as well as unexplained phenomena	November 16
WINTER ANNUAL MEETING	December
SOLID WASTE UTILIZATION — A discussion of utilization of solid waste (Recovery of materials, power generation, as well as building materials)	January
FIGHTER AIRCRAFT DESIGN AND TOUR — A discussion of new fighter aircraft design and tour of repair facilities at Alameda	February
FIBER COMPOSITE — A history of fiber composite use and present day design practice	March
UNDERWATER EQUIPMENT AND USE — Construction (welding, etc.)	April
UNDERSEA MINING OF MATERIALS — (Lockheed)	May

OTHER INTERESTS

10-MW SOLAR POWER PLANT TO BE IN SERVICE BY 1981

Southern California Edison Company in a consortium with the Los Angeles Department of Water and Power and the California Energy Commission, has joined the U.S. Department of Energy to build and operate the nation's first solar electric generating facility connected to a utility grid. This 10-MW pilot plant will be located in the Mojave Desert, and will begin operation in 1981. Current cost estimates come to approximately $120 million.

Solar central receiver programs were initiated two years ago by the Department of Energy to develop conceptual designs for both a 10-MW solar pilot plant and a 100- to 150-MW commercial solar plant. Designs and cost estimates were submitted in May 1977, and a subsystem developed by McDonnell Douglas Astronautics Company was to provide the basis for design for the pilot plant.

The plant will utilize the central receiver concept of generating electricity from incident solar energy. Using 2000 mirror modules, called heliostats, with a collector field area of 40 sq. miles per heliostat, the sunlight will be reflected to concentrate on a receiver/boiler that produces steam.

A thermal storage system will be provided to extend the plant's usefulness at night and will allow the turbine-generator to operate at 70 percent of rated output for approximately 4 hr. The storage energy, excess collected during the day, will be used to heat a high-temperature oil and crushed granite rock system with the employment of a thermocline sensible heat storage concept.

The pilot plant is being designed to provide full output (10-MW net) at 2:00 P.M. on the worst solar day (December 21). During other days, additional requirements will be routed to the storage system for use in the evenings.

After construction is completed, the pilot plant will be tested for a five-year period to establish operating and maintenance characteristics. It will provide hard experience relating to the cost of designing and constructing a solar central receiver electric generating station. Electrical utilities will then be able to make proper decisions in electing whether or not to proceed with future solar generating stations.

A paper describing this historic pilot project will be presented September 13th at the 1978 ASME, IEEE, ASCE Joint Power Generation Conference in Dallas, Texas. The authors, R.N. Schweinberg, Director, Solar Ten MW Project Office, U.S. Department of Energy, and J.L. Rasband, Supervising Research Engineer, Southern California Edison Company, will give full details of the plant to an assemblage of engineers from various power generation fields.

EXECUTIVE FITNESS COURSE OFFERED

A 2-day fitness course designed for busy professionals will be offered in San Mateo on September 11 and 12. The course will focus on motivation, nutrition, and a revolutionary 6-minute per day exercies program developed for the Apollo astronauts.

On the first day, participants will learn which major health problems are caused by a professional lifestyle, and they will then be shown specific steps to avoid these problems. The course faculty includes a registered cardiologist, a nutritionist, and a specialist in executive fitness programs.

Following further instruction on the second day, each participant will be invited to experience an optional work-shop in which his pulse rate, blood pressure, various body dimensions, flexibility, skin folds, and percent of body fat will be measured. The results will be used to tailor a fitness program to the participant.

The course is offered by the Professional Engineering Registration Program. Descriptive literature can be obtained from the program by calling (415) 593-9731 or writing P.O. Box 911, San Carlos, CA 94070.

— *JOB OPPORTUNITIES* —

MECHANICAL ENGINEERING VACANCIES

...in the production department at *MARE ISLAND NAVAL SHIPYARD,* Vallejo, California. Salary range: $12,947 to $18,258 per year. Must have an engineering degree and be a U.S. citizen.

Send resume to: Code 170.231A
MARE ISLAND NAVAL SHIPYARD, Vallejo, CA 94592.

An Equal Opportunity Employer.

Please indiate that you saw this ad in the ASME Newsletter.

EVENING TEACHING POSITION AVAILABLE

Applications are being accepted by the Professional Engineering Registration Program (PERP) for an instructor to teach an indroductory engineering course to mechanical engineering technicians.

The 40-hour, once-a-week evening course will be taught at Menlo College in Menlo Park over a 14-week period, starting in January 1979. The course is part of PERP's Certified Engineering Technician program. In keeping with the certification examinations developed by the National Society of Professional Engineers, this course covers mathematics, physics, and basic engineering skills as well as technician-level mechanical engineering.

Practicing engineers and technicians are invited to apply. PERP will assist applicants in obtaining a California community colleges teaching credential.

An information sheet and application can be obtained by writing: Director, Professional Engineering Registration Program, P.O. Box 911, San Carlos, CA 94070. For more information, call (415) 593-9731.