



IN MEMORIAM

Ben Clifford Gerwick, Jr.
Professor of Civil and Environmental Engineering, Emeritus
UC Berkeley
1919 – 2006

Ben Clifford Gerwick Jr., a world renowned civil engineer specializing in construction engineering, having advanced the field in both the professional and academic sectors, passed away peacefully at home with family members present on December 25, 2006, of complications from a lung infection. Born February 22, 1919 in Berkeley, he graduated from Berkeley High School in 1935 and received a B.S. in civil engineering from the University of California, Berkeley, in 1940. Ben served in the navy from 1940 until 1946, serving in the Atlantic, Mediterranean, and South Pacific and achieving the rank of commander. He then returned to join his family's company, Ben C. Gerwick, Inc., a marine and construction firm. He worked his way up from field and office engineer and in 1952 became president of the firm. He joined the Berkeley civil engineering faculty in 1971, establishing an academic program in construction engineering and management.

That Gerwick's specialization in construction engineering most likely stems from a very early fascination with bridges is suggested by his last book, *The Bridge Beyond*, written in 2005, a novelistic autobiography of a career in engineering. As a boy, the narrator dreams of building great bridges and shapes arches in the sand at Lake Tahoe. As a professional at the peak of his career, he travels to Hong Kong to realize his dream in the form of the world's longest cable stayed bridge, a structure requiring one of the deepest and most demanding foundations.

Gerwick developed a broad range of technical specialties required for the fabrication of modern bridge, marine, and offshore structures. These include innovations in deep foundation construction, prestressed concrete, underwater Tremie concrete, offshore structures including concrete cryogenic containment vessels, and corrosion protection for concrete reinforcing steel. His later research activities centered on problems encountered in the construction of concrete ocean structures in the hostile Arctic and North Sea environments. His research findings were quickly implemented in field construction practices, often resulting in large financial savings. He had the ability of seeing and understanding the total project and the interdisciplinary nature of the expertise needed from many different specialties to accomplish the final goal. A prolific author, he published over 240 technical papers and wrote five books; his *Construction of Offshore Structures* is a text adopted by most academic programs on offshore projects.

Some of Gerwick's many innovations are prestressed concrete piles, pretensioned concrete railway ties (used on BART), concrete gravity-based offshore concrete structures, and floating concrete structures. He served, sometimes as a consultant, in the design and construction of numerous projects, including, among others, projects in the North Sea, the Arctic, Australia, Brazil, Iran, Japan, Korea, and Saudi Arabia. He worked on the Richmond- San Rafael Bridge and the San Mateo- Hayward Bridge, both in the San Francisco Bay Area, and on many other bridges, floating structures, and port facilities, both in this country and abroad, from Denmark to Singapore. These projects attest to Ben Gerwick's international reputation.

Gerwick's activity in the broader area of technology transfer began before his appointment to the faculty when he became president of the Prestressed Concrete Institute in 1958. Subsequent to this service he greatly expanded his efforts in technology transfer, becoming president of the Fondation Internationale de la Précontrainte from 1972 through 1976. He is the only American to have held that honored position. After his election to the National Academy of Engineering in 1974 he was an instrumental member of important national committees of the National Research Council.

Ben was an outstanding teacher who attracted students from many disciplines in the broad field of engineering, as well as students from such related fields as geology. He offered his students a unique perspective on problem solving based on a multidisciplinary approach, which served to ensure that no critical aspect of the proposed structural solution was overlooked. As a lecturer he was able to bring to his students the reality and processes of how to solve complex interdisciplinary problems in large scale construction projects. Professor Gerwick had the uncanny ability to take these very complex subjects, including the construction of marine structures, and make the approach to them appear natural and straightforward. He was unusually effective in enabling the students not only to understand the basic concepts, but also to think through their own approach to unique situations independently. In his many lectures to students and professional groups, he stressed the inculcation of a creative and innovative attitude in addressing engineering and construction challenges. He required student groups to make professional presentations of their solutions to him in his office as he played the role of project owner. His students often remarked on his warm and friendly personality and on the keen interest he took in their welfare and professional development. An exceptional researcher, he was able to convey his knowledge in terms readily understood by all his students. Seventeen doctoral students completed their degrees under his supervision and are now leaders in the technical areas he developed. Retiring in 1989 at the age of 70, Professor Gerwick continued to teach, on a recall basis, in the academic program he founded until his health failed. During his over 30 years' association with the graduate program in construction engineering and management he was an inspiration to hundreds of graduate and doctoral students.

Professor Gerwick received recognition and numerous awards from professional and national societies worldwide. The extent of his international reputation is evident from the fact that these honors and awards number well over 30. Several are worth special comment:

- The Golden Beaver Award for Engineering, 1976. This is the Western United States Construction Industry's highest award.
- The Emil Morsch Medal, the highest award of the German Concrete Society, 1979. The citation was for pioneering developments in the utilization of reinforced and prestressed concretes for ocean structures and leadership in international concrete activities.
- The Berkeley Citation, awarded upon his retirement in 1989.
- The Freyssinet Gold Medal at the IX Congress of the International Federation of Prestressing (FIP) in 1982 for his work in extending the application of prestressed concrete to marine and offshore structures in the North Sea and Arctic. This is the organization's highest honor.
- Elected member of the Berkeley Fellows, 1990.

Ben Gerwick still had time to enjoy nonprofessional activities with his family. He spent personal time individually with each of his children, helping them to develop their own personalities and interests. He introduced them to tennis, fly-fishing, hiking, bird-watching, pheasant hunting, the love of gardening, the symphony and other arts, and his passion for literature.

Ben was preceded in death by his first wife of 54 years, Martelle Beverly Gerwick. He is survived by the children of this marriage: Beverly Brian of St. Joseph, Missouri, and her children, Bevan and Peter Brian; Virginia Wallace of Bainbridge Island, Washington, and her daughter Darcy Wallace; Clifford Gerwick of Indianapolis and his children, Wendy and Jack Gerwick; and Bill Gerwick of San Diego and his children, Jennifer and Erik. He is also survived by his second wife, Ellen Chaney Gerwick, and by two sisters, Jean Morken and Betty Miller.

Ben Gerwick was a gentleman and engineer who throughout his life demonstrated integrity, wisdom, creativity, and kindness. We will miss him.

Keith Crandall
Robert Bea
Robert Wiegel