



*A. K. Jensen*

## HAROLD K. FORSEN

1932–2012

Elected in 1989

*“For outstanding technical and leadership contributions to fission, fusion, and energy technology in industry and academia.”*

BY MICHAEL L. CORRADINI AND GERALD L. KULCINSKI

**H**AROLD KAY FORSEN, an early leader in the international thermonuclear fusion community who later served as an educator, industrial executive, and government advisor, died on March 7, 2012, at the age of 79.

Harold was born in St. Joseph, Missouri, on September 19, 1932. In 1952 he married his high school sweetheart Betty A. Webb while he served in the Air Force (1951–1955). After his tour of duty was finished, he enrolled in the California Institute of Technology and earned his BS and MS in electrical engineering in 1959. After graduation he worked at the General Atomics Company in San Diego on various nuclear energy issues including nuclear fusion, which later became an integral part of his career.

He decided that a PhD was required to make significant contributions in the plasma physics field, enrolled in the Electrical Engineering Department at the Berkeley campus of the University of California, and obtained his PhD in 1965 under the mentorship of Alvin Trivelpiece. His career then turned toward academia and in 1965 he was hired into the Nuclear Engineering Department of the University of Wisconsin–Madison. It was there that he became well known internationally for his insight and scholarly work in the field of plasma physics. He was also instrumental in starting the university’s

fusion technology program. Several of his PhD students went on to become leaders of the US fusion energy program.

The next chapter in his life was in nuclear fission. In 1973 he left the University of Wisconsin to lead a mostly classified program in the use of lasers to separate uranium-235 from uranium-238 at the Exxon Nuclear Company in Bellevue, Washington, where he eventually became an executive vice president.

While at Exxon, Harold was also president and then chair of the board of the Pacific Science Center in Seattle for 6 years. In 1981 he was lured to the Bechtel Company in San Francisco to be vice president and manager of the technology group. After serving in that capacity for 14 years, he retired in 1995. He lived in three different locations after retirement: Kirkland, Washington, and North Lake Tahoe and Indio, both in California.

Dr. Forsen received many awards and honors. Perhaps the one he cherished most was his election to the National Academy of Engineering in 1989. He was very active in the governance of the NAE and served as foreign secretary for 8 years (1995–2003). He was elected as a foreign member to the Engineering Academy of Japan in 1998.

Harold was an avid skier and sailor. Like everything in his life, he approached these two hobbies with the same vigor and vitality that he devoted to his academic, industrial, and advising activities during his career. Despite several injuries in later years on the ski slopes in Truckee, CA, he consistently led all skiers in his age group in the yearly downhill vertical distances achieved. His boating trips on Puget Sound were legendary as he was not one to be deterred by inclement weather. This was also typical of the many Canadian fishing and canoe trips he participated in while at the University of Wisconsin.

Harold will be remembered by his colleagues as someone who embraced the need for new forms of energy and was willing to put in whatever effort was necessary to achieve that goal. He did so with a zest for life and an enthusiasm that was contagious. His trajectory across the landscape of the worldwide

fusion energy programs will be remembered for a long time by his colleagues.

He is survived by Betty; children John (Gayle), Ron (Debbie), and Sandy (Tom); six grandchildren; and a sister-in-law and her children.