



HOLT ASHLEY

1923–2006

Elected in 1970

“For contributions to the field of aeroelastic structures and unsteady aerodynamics, aiding in the solution of problems in vibration and gust loading.”

BY BRIAN J. CANTWELL AND GEORGE S. SPRINGER

HOLT ASHLEY, professor emeritus of aeronautics and astronautics and of mechanical engineering at Stanford University, whose methods changed the design of structures from wings to wind turbines, died on May 9, 2006, at the age of 83.

His contributions were diverse and multidisciplinary. While he is known for his pioneering research and books in the field of aeroelasticity—the combination of aerodynamics and structures—he wrote classic textbooks in aerodynamics and aircraft engineering as well.

Professor Ashley served on committees and advisory boards of NACA, the National Advisory Committee for Aeronautics, the predecessor of the National Aeronautics and Space Administration; NASA itself; the Air Force; the Navy; and the National Research Council as well as of the aerospace industry. From his work on the NACA subcommittee on vibration and flutter to a review of space-shuttle tile safety, Holt Ashley applied fundamental approaches to a wide area of practical engineering problems.

Professor Ashley was elected to the National Academy of Engineering in 1970.

Holt Ashley was born January 10, 1923, in San Francisco. His father Harold had served in World War I and was a prominent businessman by the time World War II broke out. Nonetheless, he reenlisted. The younger Ashley felt intense guilt that it was his father and not he who was serving and took leave from the California Institute of Technology, where he had been a sophomore, to join the Army Air Corps. After training at the University of Chicago where he earned his undergraduate degree in meteorology, he served in the war as a weather forecaster and reconnaissance officer flying with squadrons over the North Atlantic and Europe. The experience spawned his first paper "Icing in North West Europe" and earned him six military medals. Professor Ashley was 6 feet 8 inches tall, a height that prevented his acceptance as a pilot during World War II. Shortly after joining Stanford in 1967, he achieved his dream by obtaining his pilot's license.

After earning his master's degree (1948) and doctoral degree (1951) in aeronautical engineering from the Massachusetts Institute of Technology, Holt Ashley rose through the faculty ranks at MIT to become associate professor in 1954 and full professor in 1960.

In 1964 he helped establish the Department of Aeronautical Engineering at the Indian Institute of Technology in Kanpur, India, and served as the first head of the department. He taught there during the very first year of the institute, wrote a classic book, and inspired a generation of young Indian engineers. He maintained good relations with his former students and colleagues in the decades after leaving the department. One of the young Indian engineers whom he inspired was his colleague in the Department of Aeronautics and Astronautics, Professor Sanjiva Lele, who was a graduate of IIT Kanpur and the department that Holt Ashley helped to found.

Ashley returned to his native California in 1967 to join Stanford University as a professor in the Department of Aeronautics and Astronautics. His students remember him as a patient mentor whose door was always open and whose meticulous lectures were models of clarity. He was extremely supportive of minority students, including African Americans,

and vigorously encouraged them in their studies. He also was passionately committed to fairness in the promotion of the careers of women in academe. He wrote an angry letter to one of the national committees on which he served in protest against the repression of the career of a woman scholar and threatened to boycott any further meetings until there was a change of heart. He wrote a letter in protest against the treatment of the Chinese American scientist Wen Ho Lee, who was falsely accused of stealing nuclear secrets on behalf of the People's Republic of China while employed at Los Alamos National Laboratory providentially the day before all but one charge was dropped, so his letter was not actually sent, though it was signed by both Professor Ashley and his assistant at his request.

After the death of his wife, Frances Day Ashley, his social life centered on his affiliations with the Bohemian Club of San Francisco, of which he was a member from 1962. He enjoyed the camaraderie of his fellow Sundodgers (one of the camps at the Bohemian Grove in Northern California), and all of the social, literary, and cultural activities of the club. He also liked to invite his colleagues in the Department of Aeronautics and Astronautics to join him at events that took place in the magnificent setting of the Bohemian Club in San Francisco and at the Bohemian Grove encampment near the Russian River.

Besides his involvement with the Bohemian Club, he also served on the board of the civic association for the Town of Woodside. He was very much involved in the study of the impact that expansion of the runways at San Francisco International Airport would have through increased noise over the Bay Area and his community.

Professor Emeritus (Research) Richard Christensen recalled a visit to Holt Ashley, who had been bedridden for some time, a week before his death. Professor Ashley said to him, "Please tell your lovely wife hello," not goodbye. The spirit of thoughtfulness and grace toward others that had always characterized his professional and social life he maintained to the very end of his life.

His one vice was his fondness for cigars. When Stanford

University instituted an antismoking policy inside university buildings, he found it necessary most afternoons after teaching his classes and meeting with his students to retreat to a small company on whose board he sat near California Avenue in Palo Alto so that he could smoke his cigars to his heart's content.

He had a tremendous sense of humor. At the end of a committee's first meeting he would make a motion to terminate the committee to stimulate the discussion that would test its worth. With Bob Halfman, one of his coauthors, he formed a consulting company to work on aircraft design—they called it Half-Ash Aeronautical Consultants.

Professor Ashley became emeritus in 1989. The former Aero/Astro Chair George S. Springer, the Paul Pigott Professor of Engineering, observed that Professor Ashley took early retirement to enable the department to hire new young faculty. He then proceeded to carry a full load of teaching and research for the following years without pay until a couple of years before his passing.

Holt Ashley's honors include the 2003 Daniel Guggenheim Medal, which is jointly sponsored by the American Institute of Aeronautics and Astronautics (AIAA), the American Society of Mechanical Engineers, and the Society of Automotive Engineers, and the 2006 Reed Aeronautics Award of the AIAA, two of the highest awards in aeronautics and astronautics. It was with great sadness that his physical decline was such that he was unable to attend the annual meeting of the AIAA and ceremony, where the latter award was to have been presented to him acknowledging that he had scaled the pinnacle of achievement in his discipline.

He was a man totally without guile and ill will toward any. He relished the opportunity to nominate colleagues for recognition and awards in the several prestigious professional societies of which he was himself a member, including the National Academy of Engineering and the American Academy of Arts and Sciences. Many of his colleagues benefited from the weight his own professional recognition brought to bear in their behalf through his championing of their professional advancement. Holt Ashley will forever be remembered in every respect as a gentleman and a scholar.

His work has been published in about 100 journal articles and five books: *Aeroelasticity, Thickness and Boundary Layer Effects, Principles of Aeroelasticity, Aerodynamics of Wings and Bodies*, and *Engineering Analysis of Flight Vehicles*.

He is survived by his sister, Joan Ashley Ennis, and his nephews, Ashley Ennis and Holt Ennis. His sister wrote, "We shall never stop loving him."