



Willis M. Hawkins

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1913–2004

Elected in 1966

“For design and development of aircraft, missile, and space systems.”

BY SHERMAN N. MULLIN

WILLIS MOORE HAWKINS, retired senior vice president and director of Lockheed Corporation, died of natural causes at his home in Woodland Hills, California, on September 28, 2004. He was 90 years old.

Willis was born in Kansas City, Missouri, on December 1, 1913, but spent most of his early life in Michigan. He prepared for college at the Leelanau School in Glen Arbor, Michigan, a unique private academy, which he generously supported all his life. His love of airplanes started early and continued until the day he died. He received a Bachelor of Science degree in aeronautical engineering from the University of Michigan in 1937, which also awarded him an honorary Doctor of Engineering degree in 1965. Willis was an exceptional student, noted for his amazing memory and impeccable printing on papers and examinations. These became lifelong traits.

In June 1937, an uncle gave Willis a new Model A Ford, which he and a classmate, Jack Duffendack, drove from Ann Arbor to Burbank, California, to start work at Lockheed Aircraft Corporation. Willis began as a draftsman on July 1, 1937, initiating an association that lasted 67 years. He advanced rapidly, becoming manager of an engineering department in 1944, when Lockheed employment reached a World War II high of 94,000. He was involved in the design of many propeller-driven airplanes, including the four-engine Constellation transport, which was flown by

many airlines worldwide for two decades after the war. His exceptional competence was evident to Lockheed management, including Robert E. Gross, chairman of the board from 1932 to 1961.

Besides designing airplanes, Willis was an eager flying student. After instruction in several small airplanes, he received his pilot's license in 1939. Over the years, he owned a long series of airplanes, his favorite being a Bonanza. He flew often for more than 50 years.

In 1949, Willis became chief preliminary design engineer, a position of enormous responsibility and influence. In this position, he led the design of the C-130 Hercules four-engine turboprop transport aircraft, which became one of the most versatile, successful, widely used aircraft of the century. In 2004, it was still in production and being operated in many countries. He also led the development of supersonic jet aircraft and pioneering hypersonic test vehicles. During his long career, he nurtured a group of notable engineers.

In 1954, Lockheed formed a Missile Systems Division, later Lockheed Missiles and Space Company, with Willis as director of engineering; he became vice president in 1960. For his major contributions to the development of the Polaris fleet ballistic missile system, which went into operation aboard U.S. Navy submarines in 1960, he was awarded the Navy Distinguished Service Medal in 1961.

From 1963 to 1966, Willis served as assistant secretary of the Army for research and development. He liked the Army, and the Army liked him, particularly the senior generals. Willis developed a close relationship with General Creighton (Abe) Abrams (1914–1974), the legendary World War II tank commander. After Abrams returned from Europe in 1964 to become vice chief of staff, he and Willis made many productive field trips together, neither being content to carry out endless bureaucratic work in the Pentagon. Willis was involved in many major projects, including the development of a new main battle tank, later known as the Abrams tank, which became the most capable tank in the world and was still operational in 2004. Willis received the Army's Distinguished Civilian Service Award in both 1965 and 1966.

Also in 1966, Willis was elected a member of the National Academy of Engineering for “design and development of aircraft, missile, and space systems.” In that same year, he returned to Lockheed. In 1969, as senior vice president of science and engineering, he was the senior technical officer of a very large, diversified aerospace corporation involved in a wide variety of technology and major product-development programs, including the research and development programs of Lockheed’s many divisions covering advanced aircraft, missiles, satellites, and electronic systems.

Willis operated informally and directly with engineers and scientists. A master of incisive questioning with little interest in academic credentials, he judged people by their creative technical contributions and ability to achieve practical results. He had even less enthusiasm for formal administrative procedures, big meetings, or a large supporting staff, and he kept his own file of meticulously printed notes.

Willis was a member of the Lockheed board of directors from 1972 to 1980. He briefly took early retirement in 1974 but was recalled in 1976 to become president of Lockheed California Company, a position he held until 1979. As company president, he traveled extensively, seeking new sales of the L-1011 Tristar wide-body aircraft, considered by many to be one of the best commercial aircraft of the era. He then became Lockheed senior vice president for aircraft until he retired in 1980. After retirement, he continued to be an active senior advisor to Lockheed and, after 1995, to the merged Lockheed Martin Corporation. From 1977 to 1996, three of his former subordinates—Roy A. Anderson, Lawrence O. Kitchen, and Daniel M. Tellep—served sequentially as Lockheed chief executive officer. They all respected Willis’s frank advice, solicited or unsolicited. In effect, he never fully retired.

Willis had a long record of distinguished public service from 1957 to 1992 with the National Aeronautics and Space Administration (NASA), the Army, the Navy, and the National Research Council, where he served on 10 major boards and panels. He was awarded the NASA Distinguished Public Service Medal and was a longtime member, then fellow, then honorary fellow of

the American Institute of Aeronautics and Astronautics (AIAA). In 1974, he was the recipient of the AIAA Reed Aeronautics Award. Willis was also a fellow of the Royal Aeronautical Society.

In 1982, Willis received the Wright Brothers Memorial Trophy Award for “significant public service of enduring value to aviation in the United States.” In 1985, he was selected by the National Academy of Engineering to give the Founders Lecture. His talk, “Risk and Technical Health,” reflected his deep concern that the government’s unwillingness to take technical risks was undermining the technical health of the country. In 1988, he was awarded the National Medal of Science by President Ronald Reagan, which he said “made me mighty happy.” He was posthumously inducted into the National Management Association Hall of Fame in 2004.

In his quiet way, Willis was a dedicated American patriot, deeply concerned about the future of science and technology in the United States. He was an egalitarian and privately had little respect for people who were not. Daniel M. Tellep, Lockheed chief executive officer from 1989 to 1995, was associated with Willis from 1955 to 2004. At a celebration of Willis’s life, Tellep said, “He represented to many of us engineers a template for what a good and decent and skilled and dedicated professional engineer should be. He was and always remained my engineering hero.” Willis was deeply respected by a broad range of people in many walks of life. Very few people can match his accomplishments.

Willis’s wife Anita predeceased him. He is survived by his sons, Willis Jr. and James, a daughter, Nancy Gay Bostick, and grandchildren, William L. Hawkins and Elena V.S. Hawkins.

