



RR Heppel

R. RICHARD HEPPE

1923–2015

Elected in 1982

"For continued significant contributions to aerodynamics, design, and disciplined technical management of numerous military and commercial aircraft developments."

BY SHERMAN N. MULLIN

SUBMITTED BY THE NAE HOME SECRETARY

R. RICHARD HEPPE, retired vice president of Lockheed Corporation and last president of Lockheed California Company, died January 18, 2015, in Cupertino, California. He was 91 years old.

Dick was born March 4, 1923, in Kansas City, Missouri. His family moved to San Mateo, California, in 1930 and he was a dedicated Californian for the rest his life. He was educated at Stanford University, receiving a bachelor of science degree in mechanical engineering in 1944 and a master of science in aeronautical engineering in 1945. He was elected to Phi Beta Kappa, Tau Beta Pi, and Sigma Xi. He was a graduate student at California Institute of Technology from 1945 to 1947.

Dick joined Lockheed Aircraft Corporation in 1947 in Burbank, California, as an aerodynamics engineer and remained at Lockheed for the remainder of his long career. The same year he was recruited Lockheed employment was reduced to 14,500, down from its World War II peak of over 90,000. He would play a major role in its modernization, expansion, and technology leadership.

Initially, as a member of the advanced design organization, he worked under the general direction of Clarence L. "Kelly" Johnson, the chief research engineer. He immediately participated in designing competitive high-performance aircraft, an

endeavor that would highlight his Lockheed career for the next 41 years. He was a creative engineer, assertive, a skilled mathematical analyst, and a polished writer and speaker. His management hero was and remained Harvard liberal arts graduate Robert E. Gross (1897–1961), visionary chairman of Lockheed (1932–1961).

Dick's career trajectory included piston engine-powered airliners, turboprop commercial and military aircraft, supersonic fighter aircraft, and unique helicopters, and culminated with pioneering stealth aircraft. Much of this effort was intensely stimulated by US Cold War defense strategy and national priorities.

One of his early assignments was development of the *Super Constellation*, the last Lockheed airliner powered by piston engines. It was a commercial success both domestically and internationally, and also produced for the Air Force and Navy.

Starting in 1952 Dick made a major contribution to the design and development of F-104 jet fighter aircraft, the first designed to fly at Mach 2. In 1958 it set a new world speed record: 1,404 miles per hour. A total of 2,578 F-104 aircraft were produced by Lockheed and licensed manufacturers in allied countries.

Dick was involved in developing three large turboprop propelled aircraft: the C-130 Hercules military transport, the Electra commercial airliner, and the P-3 Orion maritime patrol aircraft.

When development of a large supersonic passenger aircraft was given a high national priority in 1963 Dick was assigned as chief engineer of what became Lockheed model L-2000 supersonic transport (SST). He was very disappointed when Boeing won that intense competition in 1967 and then surprised when the program was canceled in 1971.

From the viewpoint of Heppe and Lockheed, losing the SST was a blessing in disguise. In 1967 Dick's career focus changed significantly. Competing for the development of a new US Navy carrier-based antisubmarine aircraft, he led the preliminary design and proposal effort, with Lockheed winning the competition in 1969. This resulted in the S-3A Viking aircraft program. Dick was promoted to director of engineering for

military aircraft. S-3A aircraft development and production of a fleet of 187 aircraft was completed in nine years, a unique accomplishment. This effort also initiated Dick's long involvement in the development of digital computer-based, software-controlled avionics systems.

Dick became vice president for Navy programs in 1974, and then advanced to vice president and general manager, government programs. Staggering problems on the L-1011 TriStar commercial airliner program drove Lockheed to near bankruptcy in 1971 and continuing major financial losses. The organization Heppe led was for a decade the most successful part of the Lockheed California Company and a significant factor in Lockheed's avoiding bankruptcy. This effort included developing major avionics systems improvements of the P-3C maritime patrol aircraft, incorporating them in production, and retrofitting them into the existing fleet.

In the 1970s, under Heppe's leadership, the company's international programs expanded. Australia and the Netherlands purchased fleets of P-3C Orion maritime patrol aircraft. In 1976 he led the team that won the new maritime patrol aircraft competition in Canada, resulting in the CP-140 Aurora aircraft program. Lockheed entered into a P-3C aircraft licensed production agreement with Kawasaki Aircraft in Japan, resulting in a fleet of 100 patrol aircraft. Lockheed-designed maritime patrol and antisubmarine aircraft fleets remained the most capable and widely used by the US Navy and many allied countries well into the twenty-first century.

In 1981 Heppe became a vice president in the Lockheed Skunk Works, focusing on transitioning the secret F-117 stealth fighter aircraft from development to production. He also became involved in the development and production of advanced low observable technology. The F-117 achieved initial combat operational capability in 1983. He then focused on leading the preliminary design of a stealthy Mach 2 twin engine fighter aircraft to compete in the emerging Air Force Advanced Tactical Fighter competition.

In 1984 Dick became president of Lockheed California Company, which had major plants in Burbank and Palmdale,

California. The ill-fated L-1011 commercial airliner program had been terminated in 1981 and the much smaller company was rapidly recovering. He continued to focus on the Advanced Tactical Fighter and led the formation of a Lockheed-Boeing-General Dynamics team to compete.

October 31, 1986, marked another high point in Heppes' career: The Air Force selected Lockheed and Northrop as winners of the first round of the Advanced Tactical Fighter competition. The F-22 team Dick helped create was activated, with him as a member of the executive committee.

The summer of 1987 brought a unique event in Dick's career and Lockheed history. The management of the Lockheed-Boeing-General Dynamics F-22 fighter aircraft team concluded that their F-22 fighter design was not competitive. Dick led an intense three-month redesign effort, staffed by the best engineers from the three companies, creating the F-22 fighter as it is known today—the most combat-capable fighter aircraft in the world.

Dick retired from Lockheed in 1988. However, he continued as a consultant on the F-22 fighter aircraft program through December 1990, when prototype aircraft flight testing was successfully completed and a competitive production proposal was submitted. The final high point of his career was in April 1991, when the Lockheed-led F-22 team was announced the winner of the Air Force Advanced Tactical Fighter competition.

Long an active member, Dick was elected a fellow of the American Institute of Aeronautics and Astronautics (AIAA). The AIAA also presented him with the Reed Aeronautics Award (1986), its highest professional award for an aeronautical engineer. In 1979 he received the Admiral Charles E. Weakley Award from the National Security Industrial Association for contributions to US antisubmarine warfare capability.

Dick Heppes was one of the most creative, accomplished, and versatile aeronautical engineers of the twentieth century. As a demanding leader he set high standards. Besides his technical prowess he was a gifted, forceful manager, widely recognized for his frankness and integrity. He believed deeply that engineering was a noble profession and conducted himself

accordingly. He was both a thinker and a doer and always surrounded himself with similar individuals.

Dick was a happily married and devoted family man. For decades he and his wife Pat's favorite vacation and getaway spot was the Napili Kai Beach Resort on Maui. Dick was predeceased by Patricia Kennedy Heppe, his wife of 57 years, and his son Bruce. He was survived by sons David (Jody) and Mark (Tari), daughter Janice, five grandchildren, and four great-grandchildren.