



**Luis de Florez, Rear Admiral, USNR**

Luis de Florez was born in New York, New York, on March 4, 1889, son of a Spanish father and French mother, Raphael and Marie Stephanie (Bernard) de Florez. He attended preparatory schools in Paris, France and Garden City, New York, and was graduated from Massachusetts Institute of Technology (MIT), from which he received the degree of Bachelor of Science in Mechanical Engineering in 1912. While a student at the latter young de Florez played football and baseball, and wrote the first thesis in aeronautics presented at MIT in April 1912, "Thrust in Flight of Propellers." That year he started flying at the Burgess Company and Curtiss at Marblehead, Massachusetts. He holds the honorary degrees of Doctor of Science from Rollins College, Winter Park, Florida, and Tufts College, Medford, Massachusetts, and the degree of Doctor of Engineering from Stevens Institute of Technology, Hoboken, New Jersey.

After graduation from college in 1912 he was employed in the construction and operation of various refineries for production of gasoline, including the Toluol plants for the British in 1914, and others in Mexico and Argentina. During World War I he served in the Bureau of Construction and Repair, Navy Department, as Inspector of Naval Construction (Aviation), and organized the Division of Aircraft Instruments and Accessories in that Bureau. His research, design and production of aircraft instruments and accessories served as the forerunner of naval aviation training device and equipment development which he was to initiate and guide during World War II. Prior to the second World War he was Casualty Engineer for Gulf Refining Company, Texas Corporation, S.O.N.Y., etc., and Consulting Engineer and President of the de Florez Engineering Company. He invented the "de Florez Vertical Furnace," "de Florez Cracking Process", the "de Florez Safety Drilling System" and others, and is the designer

of many aeronautic instruments and automatic pilot devices and accessories.

In 1931 he was granted a commercial pilot's license and the next year a transport pilot's license, and on June 29, 1940 became a Naval Aviator. He studied Germany's aeronautical facilities, prior to World War II, his findings later being made available for use by Allied Air Forces. He was commissioned Lieutenant Commander in the U. S. Naval Reserve on February 13, 1934, and was subsequently promoted to Commander on July 30, 1940; to Captain to date from November 14, 1942; and to Rear Admiral on November 2, 1945, to date from December 23, 1944. He was transferred to the Retired List of the U. S. Naval Reserve on September 1, 1955, but continued active duty in the Office of Naval Research.

During the summers of 1937, 1938 and 1939 he had training and flight, duty at the Naval Reserve Aviation Base, Brooklyn, New York. He was called to active duty in April 1940, while his college roommate, Charles Edison, was Secretary of the Navy. He had refresher training at the Naval Air Station, Pensacola, Florida, and after becoming a Naval Aviator on June 29 of that year, he had a month's service on board a carrier. In August, he reported to the Bureau of Aeronautics, Navy Department, where he served first as Special Assistant to the Chief of the Bureau, and later in the Engineering and Training Divisions. He had additional duty outside the continental limits of the United States several times, one such period taking him to England in the fall of 1941, as a Special Naval Observer, attached to the American Embassy, London.

In April 1943 he was designated Director, Special Devices Division, of the Bureau of Aeronautics, and while studying aviation training equipment needs and uses in the various war theaters to help aviation training keep pace with war developments, he accompanied the famous Task Force 58, under Admiral Marc Mitscher, during operations in the Pacific. In January and February 1945 he also served as a member of a Board to consider transfer of officers of the Naval Reserve to permanent commissioned rank in the U. S. Navy, On May 31, 1945 he became Assistant Chief of the Office of Research and Inventions, established by the merging of the Naval Research Laboratory, the Special Devices Division of BuAer, the Office of Research and Development, and the Office of Patents and Inventions, for the purpose of guiding naval research activities. For World War II service he was awarded the Legion of Merit and the Distinguished Service Medal. Citations follow in part:

Legion of Merit: "For exceptionally meritorious conduct as Director of the Special Devices Division of the Bureau of Aeronautics, from April 1943, to December 1944. Familiarizing himself with the special and complex problems facing the Commanding Officer of a submarine and his fire control party, Captain de Florez exercised great ingenuity and resource in the development of special anti-submarine devices and weapons and, surmounting many engineering

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difficulties in laying out and articulating successive phases of the project, personally directed the engineering research, development and production of a new submarine approach trainer of original design, accomplishing the entire project in the course of one year's time..."

Distinguished Service Medal: "For exceptionally meritorious service as Director of the Special Devices Division of the Bureau of Aeronautics and as Assistant Chief of Research and Inventions, Navy Department...Captain de Florez was in large measure responsible for the creation and development of the unique art of synthetic training perfected during the war to provide special devices and methods for the safe and rapid training of pilots and aircrewmembers. From the inception of an idea through the complicated phases of invention, research and construction to the final aspects of production, distribution and maintenance, (he) rendered distinguished service toward realizing the highest potential in training methods not only for Naval Aviation but for submarine officers and fire control parties engaged in combat patrol. His broad vision, inspiring leadership and limitless enthusiasm in the fulfillment of a particularly specialized and exacting assignment were contributing factors in our successful prosecution of the war..."

In 1944 he also received the Robert J. Collier Trophy which is awarded annually by the National Aeronautics Association for the greatest achievement in American Aviation, for his "contribution to the safe and rapid training of combat pilots and crews..."

When the Office of Naval Research was created by Congress on August 1, 1946, and began functioning on May 19, 1945, as the office of Research and Inventions, Rear Admiral de Florez was made Assistant Chief of that Office and served in that capacity throughout the remaining period of the war and until he was released from active duty.

In May 1946 he was invited by the Air Ministry of Brazil to attend dedication ceremonies in the new training building in Rio do Janeiro, and while there was awarded the Brazilian Air Force Wings in recognition of his assistance to the Air Force in planning the synthetic training program and in designing the new training center. He was a non-participating observer of the Joint Army-Navy Task Force ONE's atom bomb test at Bikini Atoll in July 1946. He was also engaged in a special project for the Office of Naval Research, having continued in that capacity since his retirement on August 1, 1955.

"For extraordinary achievement while participating in innumerable aircraft flights, contributing greatly to the progress of naval aviation and aviation in general, during a long and most distinguished naval career..." he was awarded the Distinguished Flying Cross. The citation further states In part:

"(His) original conception, design and test flying of aircraft instrumentation included the first bubble sextant, the first complete audio flight reference, and many major

contributions to the development of cockpit instrumentation and controls, air speed indicators and night lighting. A pioneer in the application of human engineering to aircraft design, he made many invaluable contributions to aircraft safety and performance...His capabilities as a pilot were attested by his performance in countless races and acrobatic contests, including the Amateur Acrobatic National Contest. Throughout his career, Rear Admiral de Florez was in the forefront of naval aviation as inventor, designer and pilot, qualifying in carrier operations and in almost every aircraft type and model in contemporary use, including helicopters and jet planes. From 1956 to 1958, while attached to the Office of Naval Research, he made significant contributions to design and testing activities, including personal project flying on short takeoff and landing aircraft, aircraft silencing, and other important projects of a classified character..."

In addition to the Distinguished Service Medal, the Legion of Merit, and the Distinguished Flying Cross, Rear Admiral de Florez has the Victory Medal (World War I); the American Defense Service Medal; American Campaign Medal; Asiatic-Pacific Campaign Medal; World War II Victory Medal; and the Naval Reserve Medal. He has also been awarded the decoration, Honorary Commander of the Military Division of the Most Excellent Order of the British Empire, by the Government of Great Britain. While in inactive duty status, he was awarded the Silver and Gold Medals of the Spanish Red Cross in recognition of his equipping ambulances and supplying medical aid to the Government of Spain.

Married in 1912 to Miss Marian King of Belmont, Massachusetts, Rear Admiral de Florez had a son, Peter de Florez.

He was a member of the Union, Raquet and Tennis, St. Anthony, and Long Island Aviation Clubs of New York, and of the Metropolitan Club of Washington; and the American Society of Mechanical Engineers, Society of Aeronautical Engineers and others.