



Sikorsky Archives News

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Igor Sikorsky's Early Years in America – Airplanes, Amphibians and Flying Boats

Igor Sikorsky arrived in New York City on March 30, 1919. Two years earlier, he had been the leading authority on aviation in Russia. Now he was an immigrant hardly speaking English. After unsuccessful attempts to penetrate the depressed aviation industry at the time, he became a mathematics and science educator to Russian immigrant groups in New York. During this period, he worked on designs of commercial aircraft which evolved into the S-29A. He designated this aircraft as an "A", representing the first aircraft designed in America. 🇺🇸



Historical data for this newsletter was obtained from, "The Sikorsky Legacy" written by Sergei Sikorsky, and "The Technical History of Sikorsky Aircraft and its Predecessors", written by "Prof" Igor Alexis Sikorsky.



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Igor Sikorsky's Dream Early In Life Guided His Future Accomplishments--

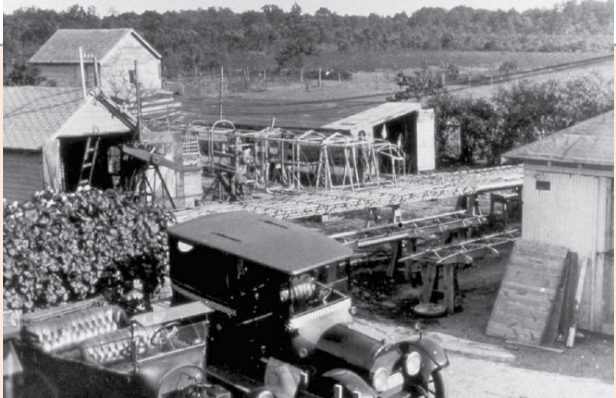


“During the year 1900, at the age of about 11 years, I had a wonderful dream. I saw myself walking along a narrow, luxuriously decorated passageway. On both sides were walnut doors, similar to the stateroom of a liner. The floor was covered with an attractive carpet. A spherical electric light from the ceiling produced a pleasant bluish illumination. Walking slowly, I felt a slight vibration under my feet and was not surprised to find that the feeling was different from that experienced on a steamer or on a railroad train. I took this for granted because in my dream I knew that I was on board a large flying ship in the air. Just as I reached the end of the corridor and opened a door to enter a decorated lounge, I woke up.”

After completing his first successful and distinguished career in Russia, Igor Sikorsky was able to start his second aviation career on a farm located on Long Island, New York, provided by Lt. Victor Utgoff, a Russian Navy pilot assigned to the Russian Embassy in Washington, D.C. He volunteered the use of the farm and his house as Sikorsky's new factory and home. On March 5, 1923, just four years after entering America, Igor Sikorsky founded Sikorsky Aero Engineering Corporation. The

S-29A was developed and placed in service earning revenue by carrying sightseeing passengers over New York Harbor, and charter flights for marketing purposes. The composer pianist Sergei Rachmaninoff invested \$5,000 in the company, allowing the company to rent an old hangar on Roosevelt Field to assemble and operate the aircraft. The aircraft was sold and eventually acquired by Howard Hughes, and destroyed during an air-to-air combat sequence in the World War I epic, “Hell's Angels”. 🍷

The Lean Years on the Utgoff Farm On Long Island



Utgoff Farm



Sikorsky Aero Engineering Corporation



Igor Sikorsky and Mrs. Utgoff



Igor Sikorsky at the sea shore 1921



Igor Sikorsky being interviewed after a flight in the S-29A

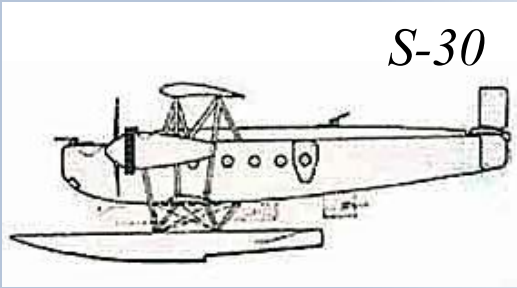


Igor Sikorsky and the S-29A during fabrication



S-29A

The S-29A was completed in the spring of 1924. The pilot sat in an open cockpit, and 14 passengers could be carried after the aircraft was upgraded with two 400 hp Liberty engines. The aircraft was used for charter flights and marketing purposes. The barnstormer and racing pilot Roscoe Turner bought the aircraft in February 1928. He eventually leased it to Howard Hughes who modified it to look like a German Gotha bomber for his movie "Hell's Angels".



S-30

The S-30 was designed as a light military naval bomber, and had a version as a commercial transport aircraft. It was designed for two engines. Although the aircraft was never built, many of the design details were incorporated in the S-35.



S-31

The S-31 was built for the Fairchild Company for aerial mapping and photography in South America. The aircraft was powered by a 200 hp Wright J-4 Whirlwind engine. It could carry up to four passengers in the forward cockpit and semi enclosed cabin between the two cockpits. The 45 foot wingspan allowed flights at altitudes of 12,000 to 15,000 feet. The aircraft could be used for armed escort or bomber missions.



S-32

The S-32 was built in 1926 for a subsidiary of the Standard Oil Company, and was used extensively in Colombia. It was powered by a 400 hp Liberty engine, and had a wingspan of 58 feet. Two pairs of passengers sat in the two front cockpits. The pilot sat in the rear cockpit. Most of the flying was done on floats.



S-33

The S-33 was built as a racing aircraft with a 60 hp Wright engine in 1926. A second S-33 was built in 1927 in a two seat configuration powered by a 60 hp Lawrence engine. The aircraft had a wingspan of 32 feet and could reach a speed of 103 miles per hour.

S-36 Prototype



The S-34 built in 1926 was Igor Sikorsky's first amphibian and could carry six passengers. It had a short life and was replaced by the S-36. The prototype S-36 was an improved S-34 with two 200 hp Wright engines. It retained the three open cockpits of the earlier S-34. The S-36 was built in 1927 and was purchased by the U.S. Navy and operated as the XPS-1. The wing was designed so that the span could be increased from 62 to 72 feet for long range missions.

S-36 Production



Five production S-36 aircraft were built in 1927. The U.S. Navy and Pan American Airways bought two each, and one by Frances Greyson, a niece of President Woodrow Wilson. Determined to be the first woman to fly the Atlantic, she hired two pilots for the trip. Despite warnings, she took off in December 1927 and vanished without a trace over the Atlantic.

S-35



In early 1926, work started on a new twin engine aircraft to replace the S-29. It attracted French World War I ace Rene Fonck, who persuaded Igor Sikorsky to redesign the S-35 into a three engine long range aircraft to win the Orteig Prize for the first nonstop flight between New York and Paris. Initial flight tests in August 1926 were highly successful, and New York journalists predicted it would take the cross Atlantic prize. To manage the increased weight of the aircraft, auxiliary gear was added. During take off on September 21, 1926, the gear broke and the aircraft crashed into a ravine. The pilot and copilot were the only survivors.

Rene Fonk's S-37



Rene Fonck's new trans Atlantic aircraft was the S-37, powered by two 500 hp Jupiter engines. It had a wingspan of 100 feet and a potential range of 4,000 miles at a cruising speed of 120 miles per hour. When Charles Lindbergh won the Orteig Prize in May 1927, Fonck's backers sold the S-37. It became the first commercial transport between Buenos Aires and Santiago, regularly crossing the 19,000 foot Andes Mountains.

S-37 Bomber Configuration



A second S-37 was jointly built by Sikorsky and Consolidated Aircraft. It was designed as a bomber, but when the U.S. Army Air Corps showed no interest, it was converted into a 20 passenger commercial aircraft and sold to a South American airline.



Martin and Osa Johnson's S-38 in Africa with lion observers



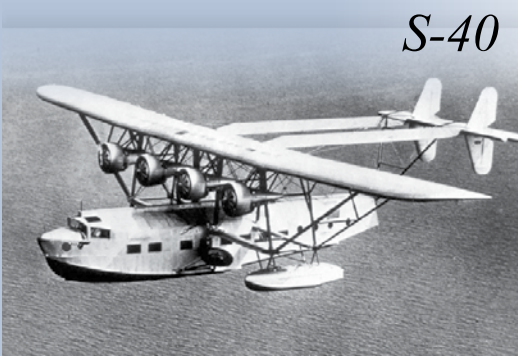
Replica of S-38 with Safari Markings



S-39

The S-38 was a twin engine amphibian that could carry eight passengers and two crew members. The prototype S-38A was certified in June 1928. Initial production aircraft were built at College Point, Long Island, plant. The success of the S-38B justified the building of a new dedicated manufacturing plant in Stratford, CT. The first Stratford built aircraft was delivered in November 1929. Most S-38s were powered by P&W Wasps 420 hp engines. A few were delivered with 500 hp Hornets and Cyclones. In all, about 114 S-38s were built.

In 1933 and 1934, famed African explorers Martin and Osa Johnson used an S-38 and S-39 to explore and film remote parts of Africa. The Flying Safari covered more than 60,000 miles, much of it uncharted territory. The wing tip floats were removed to save weight.



S-40

The S-39 built in 1930 was a small five seat amphibian powered by a 300 hp P&W Wasp Jr. engine. About 21 were built and operated as newspaper photo planes and by private owners. One restored S-39 is still flying.

The S-40 built in 1931 was a large amphibian capable of carrying up to 40 passengers and powered by four P&W engines. Three were built for Pan American Airways. The first was christened the American Clipper. In 1935, the three aircraft had the landing gear removed to save 1200 pounds, and higher powered 660 horsepower P&W Hornet engines were installed. After flying more than 10 million miles without incident, they were retired from passenger service in 1940. Following Pearl Harbor, the aircraft flew as trainers and cargo carriers for the U.S. Navy.



S-41

The S-41 designed and built in 1930 was basically a larger S-38 with a longer wing span carrying 12 to 14 passengers. Powered by two 575 hp P&W Hornet engines, it cruised at about 120 miles per hour. Seven were built and sold to Pan American Airways and the U.S. Navy as RS-1s.

S-42

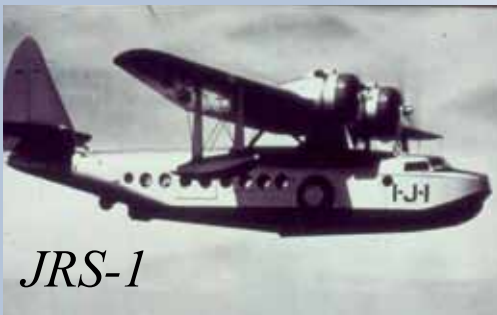


The S-42 entered service with Pan American Airways in 1934. The four P&W 750 hp Hornet engines were hidden in streamlined cowling in the graceful wing designed by Michael Gluhareff. It carried 35 passengers 1000 miles at cruise speeds up to 160 miles per hour. It established ten world records, eight in one day. Ten aircraft were built.

S-43



First flight of the S-43 amphibian was on June 1, 1935. Powered by two 750 hp P&W Hornet engines, it carried 15 passengers at 165 miles per hour and had a range of 750 miles. Often called the Baby Clipper, it was flown in the Americas, Europe, Africa, and the Far East. A total of 53 were built.



JRS-1

The U.S. Navy bought 17 S-43s in 1937 and 1938, designating them the JRS-1. The U.S. Army Air Corps bought five in 1937 designated the X10A-8. Several JRS-1 aircraft were at Pearl Harbor on December 7, 1941. One survived the devastating Japanese attack and was the first American aircraft to take off and hunt for the Japanese fleet. The same aircraft is stored by the National Air and Space Museum awaiting restoration.



XPBS-1

The Sikorsky XPBS-1 long-range patrol bomber first flew on August 13, 1937. With four 1,050 hp P&W Wasp engines neatly cowled in the 124 foot wing, the aircraft had a maximum range of 4,000 miles. Although superior in performance it lost to a lower price competitor.

VS-44 Excalibur



The Excalibur built in 1942, was the first of three VS-44s for American Export Airlines. The Excambian and the Exeter were put into service later that same year. The Excambian flew charters in South America and then flew for Avalon Air transport in California and Antilles Air Boats in St. Thomas. Damaged beyond repair in a landing accident, it was eventually restored by a group of Sikorsky volunteers and is now in the New England Air Museum.



VS-44 Excambian



The Excambian shown damaged beyond repair



The restored Excambian at the New England Air Museum

Igor Sikorsky's dream as a young boy was realized with the first four engine aircraft in the world, the S-21 Grand. It incorporated an enclosed cabin and separate passenger compartments. The dream came to full fruition in America with the large amphibians and flying boats of the 1930s.



S-21 Grand



S-42 cut-a-way view of interior compartments



Dinner in flight on the S-42



S-42 Passenger Compartments and Accommodations

Igor Sikorsky's last flying boat design was the S-45



S-45 was never built due to growing World War II priorities. A model of a 100 passenger flying boat of the future still hangs from the ceiling in Igor Sikorsky's office



Sergei Sikorsky

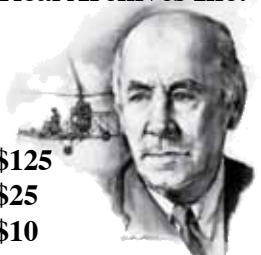
The Russian Helicopter Industry and The Arizona Wing of the Commemorative Air Force Honored Sergei Sikorsky in February 2012, for his lifetime contributions toward the development of the helicopter worldwide industry. The details of the occasion and awards bestowed on Sergei are defined in the Sikorsky Archives News Flash provided as an insert to this newsletter.

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Designed and edited by Lee Jacobson and Archive Members with graphic art assistance by Edgar A. Guzmán.

Igor Sikorsky prepared these notes on board an S-42 Pan American Airline flight to Rio de Janeiro, Brazil, on September 13, 1937.

“This may be considered the realization and fulfillment of the dreams of some 35 years ago. Travelling on a flying ship of my own design for a really long trip from continent to continent. Would I have the chance to produce still larger planes to fly from N.Y. to Europe? Maybe. But if not, I would still have all

the reasons to be greatly thankful to Destiny for this successful and interesting life’s work. Even if this Clipper would be the last of my work, it will remain a link in the progress of aviation. It will remain the Flagship that pioneered the Pacific and brought North and South America closer together.” ☺

