

# K-SHIPS ACROSS THE ATLANTIC

BY DON KAISER

**D**uring World War II, the Goodyear Tire and Rubber Company manufactured approximately 130 non-rigid airships, designated as ZPN-K-class blimps, for the U.S. Navy. These “K-ships” were used primarily for convoy escorts, anti-submarine warfare (ASW), rescue missions, and mine-spotting operations. Prior to the use of significant blimp escorts in 1942, about 63 merchant ships were sunk by German U-boats off the east coast of the United States. As the Navy acquired more blimps and convoy escorts increased, that number decreased to just three in 1943, none in 1944, and two in 1945. It is estimated that only one of approximately 89,000 ships in blimp-escorted convoys was lost by enemy action (Vaeth, pp. 21-2). These now largely forgotten naval aircraft helped win the war in the Atlantic, and their achievements are an important part of the story of the first century of Naval Aviation.

Because of their impressive escort record, new navigation and U-boat detection technologies, and suitability for patrolling in fog or darkness, in 1944 the Navy decided to send a squadron of six K-ships to North Africa for ASW operations around the Strait of Gibraltar. Although several rigid airships had crossed the ocean since 1919, by 1944 no non-rigid airship had ever attempted such a flight. Sending an entire squadron across the ocean was risky; the decision to do so demonstrates how important ASW was to the Allies during the war.

## PREPARATION AND PLANNING

The Navy chose Blimp Squadron (ZP) 14 based at Naval Air NAS Weeksville, N.C., and six new Goodyear K-ships for the first transatlantic flights. Keeping U-boats out of the

Mediterranean Sea was essential for Allied efforts, especially for the invasion of southern France (Operation Dragoon) slated for 15 August 1944. Although regular aircraft could patrol for U-boats during the day, they had difficulty at night. According to one of the squadron’s officers, Ens. William Kaiser (my uncle), rumors circulated around the squadron that using blimps for nighttime U-boat patrols at the Strait of Gibraltar was the idea of British Prime Minister Winston Churchill.

In 1944, blimps could not carry enough fuel to cross the ocean without stopping, so two stopovers were planned for refueling, maintenance, and crew changes. A combat air crew competition was held at Weeksville to select some of the crew for the flights. Those selected immediately began to plan and prepare for the transatlantic flights. Three routes were considered, but north and south Atlantic routes



*A K-class blimp from Blimp Squadron (ZP) 14 lands at Lagens Field on Terceira Island in the Azores on the morning of 31 May 1944 during the squadron's historic journey across the Atlantic to French Morocco. (Photo from William Kaiser)*

were eventually scrapped in favor of a mid-Atlantic route from NAS South Weymouth, Mass., to North Africa with stopovers in Newfoundland and the Azores. In late 1943 and early 1944, six brand new Goodyear K-ships were delivered to NAS Lakehurst, N.J., and modified for the flights. Pilots from each crew received training in either magnetic anomaly detection (MAD) at Columbia University in New York City or long-range navigation (LORAN) at Norfolk, Va. Recent

graduates of the U.S. Naval Academy trained in navigation were assigned to each crew as navigators. One of these, Ens. Andy Papageorge, remarked that celestial navigation in a K-ship was particularly difficult because the airbag over the control car limited the visible region of the sky to just 30 degrees above the horizon. Some of the enlisted men received special radio and radar training as well.

All six combat crews eventually assembled at Lakehurst, where they met their new squadron skipper, Cmdr. Emmett J. Sullivan, one of the most experienced lighter-than-air officers in the Navy. Sullivan had just arrived from Fleet Airships Pacific Training Unit (FAPTU) in Del Mar, Calif., where, as officer in charge, he was an expert in training combat blimp crews. Prior to FAPTU, Sullivan was commander of ZP-33 at Tillamook, Ore. The modified K-ships were then ferried from Lakehurst to South Weymouth for the transatlantic flights. Deciding to err on the side of caution, the Navy sent the blimps across the ocean in pairs at approximately two-week intervals depending on the weather and war-related conditions



*K-123 was the first airship to take-off from Lagens Field on Terceira Island in the Azores on 31 May 1944. Lt. j.g. Homer Bly (pilot) manned the elevator (top right in the control car), Ens. Warren Ireland (co-pilot) manned the rudder (window, top left), and Ens. William Kaiser (co-pilot) took the forward lookout position. (Photo from William Kaiser)*

along their route. Four combat air crews were transported aboard Navy R5D transport planes (C-54 Skymasters) to Newfoundland and the Azores to fly the second and third legs of the transatlantic flights, respectively.

### ***THE FIRST TRANSATLANTIC FLIGHTS***

K-123 and K-130 were the first K-ships to embark on a transatlantic voyage when they took-off from South Weymouth on the night of 28 May 1944. The first leg was an approximately 800-mile, 16-hour flight to NAS Argentia in Newfoundland flown almost entirely in “zero-zero” conditions. Lt. j.g. John J. Connery, pilot of the lead ship K-130 and officer in charge of the first leg, recorded the flight in his logbook no differently than any other routine flight. On the evening of 29 May, about the same time the blimps were landing in Newfoundland, USS *Block Island* (CVE 21) was torpedoed by a German U-boat while conducting ASW operations in the Azores area. If this was known to the crews who were preparing to fly the second leg of the first transatlantic flights from Newfoundland to the Azores, it certainly must have provided some concern and

motivation. (*Block Island* was the only U.S. aircraft carrier sunk in the Atlantic during World War II.)

The second leg was the longest, a 1,300-mile, 22-hour flight to Lagens (now Lajes) Field on Terceira Island in the Azores. A surface vessel sent weather information to the blimps along this route. Pressurized helium gas that had been shipped aboard USS *Rehobeth* (AVP 50) two weeks earlier was used to top-up K-123 and K-130 during their stopover in the Azores. The third leg was an 1,100-mile, 20-hour flight to Craw Field at Port Lyautey (now Kenitra) in French Morocco. Sullivan piloted the lead ship K-130 on the final leg of the flight.

On the night of 31 May between the Azores and North Africa, Aviation Radioman Second Class F. A. Lange was changing the flare in his Very pistol,

a flare gun for close-range communication using different colored signal flares. (The blimps did not want to attract attention and were operating under strict radio silence.) Lange, who was in K-123, accidentally discharged his pistol and illuminated the dark night sky with a brilliantly colored display. When Sullivan saw the flare, he became so enraged that he broke radio silence to find out what was going on and reprimanded the crew of K-123. Fortunately, both K-ships proceeded on apparently undetected. Weather information was sent to the blimps periodically by an Army weather service plane that flew ahead of the blimps on the third leg.

On arriving in French Morocco on 1 June, K-130 and K-123 were the first non-rigid airships to complete a transatlantic crossing. The entire 80-hour trip covered 3,162 nautical miles, over which the K-ships averaged 53.8 knots during 58.7 hours of actual flying time at an average elevation of 500 feet. On 15 June the second pair of blimps, K-109 and K-134, landed at Port Lyautey after following the same route in about 68 hours; the third pair of blimps, K-101 and K-112, arrived in a record flight time of 52 hours on

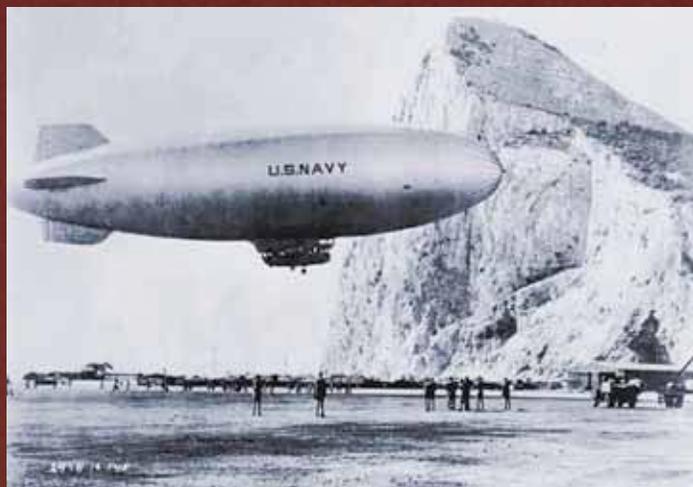
1 July. Each of the six flight crews flew the same leg three times, once on each of the three trips.

### **MEDITERRANEAN OPERATIONS**

With its six K-ships in North Africa, ZP-14 became known as the "Africa Squadron" and was assigned to Fleet Air Wing 15 and the 8<sup>th</sup> Fleet. The blimps conducted ASW operations using new twin-head MAD sensors that could detect small disturbances in the earth's magnetic field made by U-boats at the Strait of Gibraltar or by one-man German subs in the harbor at Toulon, France. At Toulon and other Mediterranean ports the blimps assisted surface minesweeping vessels by spotting mines from above. Various rescue and escort missions were flown as well, including that of the convoy carrying Churchill and President Franklin Roosevelt to the Yalta Conference in February 1945.

Before ZP-14's arrival, PBYs with VP-63 used MAD sensors to look for U-boats near Gibraltar. In fog or darkness, however, flying the PBYs was dangerous because MAD required low altitudes (75-100 feet) to detect submarines. K-ships were the perfect solution to this problem. They flew the night shift while the PBYs flew the day shift, creating a 24/7 magnetic fence that made it almost impossible for any U-boat to pass through the strait unnoticed. As it turned out, the last U-boat was sunk in the region on 15 May 1944, about two weeks before the first blimps arrived. Two PBYs from VP-63 used MAD to locate *U-731* and damaged it with bombs; the sub was eventually sunk by the trawler HMS *Blackfly* and patrol vessel HMS *Kilmarnock*. Possibly because of concerns about MAD, the Germans decided to stop sending U-boats through the strait when the first two K-ships arrived.

In September 1944, ZP-14 established its first advanced base at the Cuers-Pierrefeu Airdrome near Toulon, where in



*On 18 July 1944, K-112 became the first K-ship to land on the European continent when it landed at RAF Gibraltar. Sullivan took Air Vice Marshal Alick Stevens up in K-112 to demonstrate its ASW technology.*

1929 the German dirigible *Graf Zeppelin* (LZ 127) put-in for repairs just prior to making the first around-the-world flight. ZP-14 used the huge airship hangars at Cuers as well as recently captured German soldiers, who manned the ropes during grounding and docking operations.



*This is one of the six crews chosen for the transatlantic flights following a combat air crew competition held at NAS Weeksville in North Carolina. Ens. William Kaiser is standing third from the left. Aviation Radioman Second Class Paul Galbreath is standing on the right. (Photo from William Kaiser)*

The Germans had mined many ports in France and Italy that the Allies needed to supply their armies. The blimps proved to be very effective at spotting mines and directing minesweepers safely through mine fields. This resulted in rapid clearance of the mine fields with few minesweepers lost. After clearing French waters, the Africa Squadron established advanced bases at Bizerte in Tunisia and Cagliari, Rome, Pisa, and Venice in Italy. On 28 April 1945, two ZP-14 replacement blimps left Weeksville and flew a different route to North Africa. K-89 and K-114 made stopovers in Bermuda and the Azores before arriving at Port Lyautey on 1 May. Papageorge, one of the navigators, said that the Bermuda-Azores leg established a new distance record (1,881 miles) for a single flight by a non-rigid airship. These two airships replaced two of the original six K-ships that were accidentally damaged at Port Lyautey.

For participation in the first transatlantic flights by non-rigid airships, the Navy awarded Sullivan the Bronze Star. Air medals were awarded to the squadron operations officer and pilots. The co-pilots and navigators received letters of commendation. Enlisted men received no recognition until Senator John McCain (Ariz.) helped the last known surviving enlisted men obtain air medals for their service. In 1999, Aviation Radiomen Second Class Wallace Vilven and Paul Galbreath were so honored. 

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