**Jack Northrop’s First Success: The Vega**

**ALAN RADECKI**

In 1926, aviation pioneer and engineer Allan Loughead (later changed to the phonetic pronunciation “Lockheed”) asked his old friend Jack Northrop to design a small airliner. Loughead had operated a sightseeing airline on Catalina Island — located just off the Southern California coast — and felt the time was right to come up with a new aircraft design. Northrop started drawing up the design in his living room, and soon he and Loughead formed the Lockheed Aircraft Corp. in order to build their new plane, the “Vega.” Loughead managed the business, while Northrop served as chief engineer.

In an era when most airplanes relied on an internal structure and external braces to carry loads and the skin was a mere fabric covering, Northrop and Gerard Vultee, a structural aeronautical engineer, used a radical process of pressure-molding the plane’s skin from plywood (not unlike today’s composite techniques) and using it in a monocoque design, where the skin itself carried the loads.

Two large concrete molds were used to form the fuselage in the halves, which then were joined together. The Vega’s cantilever wings also were fabricated from plywood.

The Vega first flew on July 4, 1927, and instantly was a success. George Hearst purchased it for entry into the upcoming Dole Derby. The prize: $25,000 to the first person who flew from the United States to Hawaii — Hawaii didn’t even exist until August 1959. Hearst named the plane Golden Eagle and hired John “Jack” Frost to fly it, along with navigator Gordon Scott. Of the eight entrants, several turned back or crashed right after takeoff. Frost and the Golden Eagle left Oakland on Aug. 16, 1927, bound for Honolulu, and were never seen again. One of the planes that had turned back later tried to find the Vega, but it too disappeared without a trace.

Despite the tragic loss of the first Vega and its crew, the design was wildly successful, and the list of aviators who set records in Vega aircraft reads like a who’s who of the Golden Age of aviation, including Amelia Earhart, Jimmy Doolittle, Art Godshalk, Frank Hawks, Wiley Post and Roscoe Turner.

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**SECTOR SHOWCASES UAS CAPABILITIES AT BERLIN AIR SHOW**

Aerospace Systems successfully highlighted its industry-leading intelligence, surveillance and reconnaissance capabilities with the EURO HAWK® and NATO Alliance Ground Surveillance (AGS) unmanned aircraft systems (UAS) during the 2012 ILA Berlin Air Show this past summer on the new exhibition grounds at the Berlin ExpoCenter Airport. Both systems are international derivatives of the RQ-4 Global Hawk high-altitude, long-endurance UAS. The company’s German subsidiary, Northrop Grumman LITEF, also was represented at the air show and displayed its aircraft navigation and stabilization sensor technology. A full-scale model, configured in EURO HAWK® and NATO AGS livery on alternate days, was on display in front of the company’s pavilion, attracting thousands of attendees.

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