

Atlas deutscher und ausländischer Seeflugzeuge.

THE OERTZ FLYING BOATS

Compiled by Paul Leaman

OF ALL OF THE SEAPLANES listed in the *Atlas*, those designed by Dr Ing Max Oertz most accurately deserved the name flying boats.

Max Oertz was born in Neustadt in Holstein, Germany on 20 April 1871. He was orphaned at the age of five and subsequently brought up by a family in Berlin. He studied boat and ship design and construction at the university at Charlottenburg in Berlin and then worked as a technical designer for Blekholmens Varf in Helsingfors (now Helsinki) for a number of years, returning to Berlin in 1895.

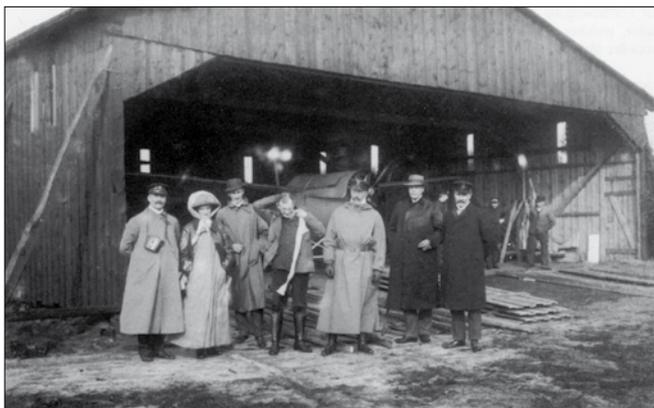
In 1886, with his friend Hans Harder, he formed *Werft Oertz & Harder*, a company based in Hamburg that designed and built sail and motor boats. Amongst these was the *Luna* an all aluminium yacht built for the Berlin banker Barthold Arons. He became the company's sole owner in 1902 and became famous for his creations. Amongst these were yachts for Gustav Krupp and Kaiser Wilhelm II.

In 1909, inspired by a meeting with Otto Lillienthal, Max Oertz built a large pusher biplane with *Taube* shaped wings. In the manner of the time, its tail assembly of two rudders and a tailplane, was mounted on an open wooden tail boom structure. This was successfully flown from his site in the Schnevingen area of the Lünenburg Heath in north Germany. His interest in aviation continued and he built a series of simple aeroplanes, culminating in a sleek light monoplane with an enclosed wooden monocoque fuselage and large *Taube* shaped wings. This weighed just 770lb, was powered by a 70hp Gnome rotary engine and had a top speed of 80mph. But, with his main interest and training being in the design and construction of yachts, it is not surprising that he turned his attention to the construction of boats that were intended to fly.

Oertz's flying boats were all built with the craftsmanship and attention to detail that he had lavished on his yachts. They also enjoyed a number of unusual, but ingenious, features. Because his first consideration was for their stability and seaworthiness in typical running seas, their hulls all had very broad beams, intended to provide lateral stability. That this succeeded was proved by the fact that a man could walk out half way along the

A VIP visit to the Oertz flying field at Schneverdingen. Prince Heinrich is third from the right in front of the aeroplane and the lady second from the left is his wife. The Oertz pilot, Stagg, is standing on the prince's right.

:Klaus Kramer



wings without them tilting down into the water surface. Apart from FB.I, his early designs dispensed with conventional wing tip 'floats' and relied on spring loaded boards that would 'flip' a descending wing tip away from the water. All of the Oertz flying boats were powered by engines buried within their hulls (at their centre of gravity), that drove their pusher propellers mounted behind and to the rear of the wings via bevel geared shafts.

The design of the wing also deviated from the then established norm in several ways. First, they were constructed as 'left and right' units that could readily be removed separately from the fuselage. The chord and span of the lower wings were considerably larger than those of the upper wings. This was intended to raise the centre of pressure of the biplane structure so reducing any pendulum effect caused by the weight of the engine inside the fuselage. (In fact this tendency proved to be of little importance). To ensure that both upper and lower wing structures were equally supported, the interplane struts were inclined inward. The Imperial German navy favoured float planes rather than flying boats and Oertz failed to gain production orders for his designs, so the total number of flying boats built by Oertz was small – only twelve. But, as has been explained, what they lacked in quantity, they made up for in ingenuity and originality. All of the flying boats produced by the *Max Oertz Yachtwerft* displayed the fine workmanship and materials that had earlier been found in the series of beautiful yachts that had been produced and for which he is still justly famous. Because of the lack of orders, the factory turned to the manufacture of Sablatnig SF.4, SF.5 and SF.8 floatplanes under license. In addition to his designs for his own construction, Oertz also provided designs for the *Flugzeugbau Friedrichshafen GmbH*: their FF.11 and FF.21. Neither of these appeared in the pages of the *Atlas* and their details and use are not known. During the later stages of the war, the company was absorbed by the *Hansa und Brandenburgische Flugzeugwerke* and Dr Ing Oertz returned to the design and construction of sea going vessels, including an ingenious design for the rudders of large powered vessels, such as the German liner *Bremen*.

Note: From a conversation with Klaus Kramer, Max Oertz's biographer, I understand that, in spite of his interest in sailing vessels and aviation, Dr Ing Oertz was never either an

The futuristic looking Oertz Taube IV powered by a 70hp Gnome rotary engine and intended to compete in the Gordon Bennet competition in Chicago USA in 1912. Reportedly (New York Times, c.24 March 1912) capable of 100 mph.

:CCI

