

Dr. Wolfgang Klemperer †

18 January 1893–25 March 1965

OSTIV regrets to announce the death of Wolfgang B. Klemperer, one of the pioneers of gliding, one of the founders of OSTIV, and for many years a member of the OSTIV Board.

Dr. Klemperer, although born in Dresden 72 years ago, was of Austrian parentage. He left a lasting mark on the development of gliding and soaring, but his technical interests were extremely broad and he will be remembered for many and varied developments and inventions.

As early as 1912, while still at school, he designed and built a tail-first powered aircraft with a 55 h.p. radial engine. In World War I he flew with the Austrian Air Force as an observer officer and gained three decorations. He completed his pilot training in 1918 and at the end of the war he returned to Dresden, graduating in 1920 with his Engineering Diploma. Although he had offers in outside industry, he preferred to stay with aviation. So he went to Aachen and became assistant to Professor von Karman. A combination of this remarkably brilliant chief surrounded by such people as Blumenthal, Hopf and Trefftz, gave Klemperer a most unusual and valuable insight into scientific techniques and problems and he was given the opportunity to deal with much original work.

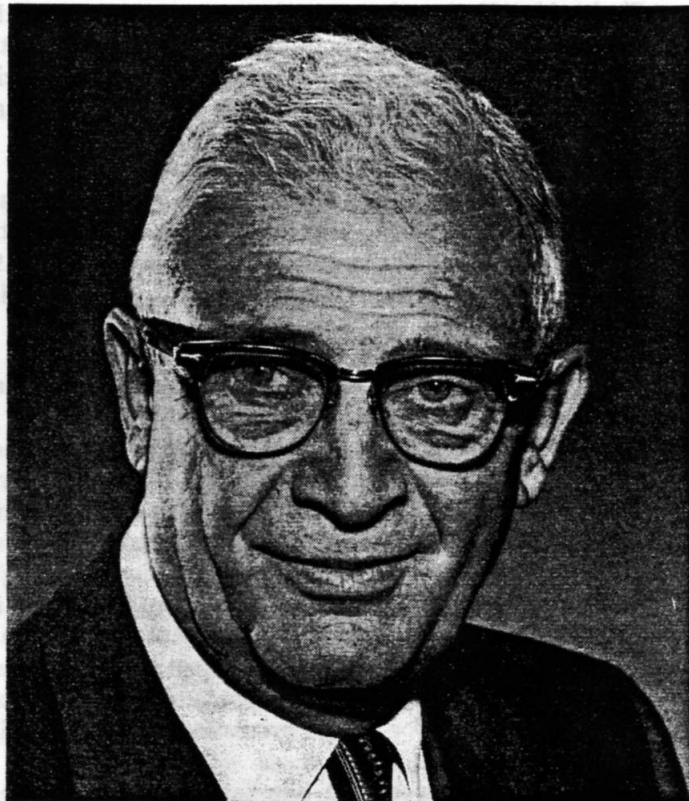
As soon as he came to Aachen, he took over the recently-founded Flight Technical Group in the Technical University. Here Klemperer's work in gliding commenced. It was to be a critical influence for the whole movement, which at that time was just in its birth pangs and therefore in a difficult phase.

The first Rhön Gliding Competition had been planned for the year 1920 by Oskar Ursinus. It might well have been a fiasco had it not been for Klemperer who appeared among the many enthusiastic amateurs with his technical Group from Aachen and their "Schwarzer Teufel" (Black Devil) which was the first sailplane designed to take advantage of the latest available aerodynamic information. It had a cantilever wing of thick section and was the basis of the success of the competition. He won the contest with a flight over a distance of 2.2 kilometers. He also introduced the bungee method of launching sailplanes, which, as is well-known, accelerated enormously the early development of gliding.

At the next Rhön contest in 1921, he appeared again with the Aachen Group with his "Blaue Maus" (Blue Mouse). The "Blaue Maus" was a development of the "Schwarzer Teufel" (see Table). It was a low-wing monoplane with an open cockpit and had two side-by-side sprung skids.

With the "Blaue Maus", Klemperer made the first flight from the Wasserkuppe to Gersfeld, using to some extent a cold front. This flight lasted 13 minutes and improved on Orville Wright's record of 9 minutes, established in 1911. As a result of this flight, Klemperer received the very first gliding pilot's certificate. He also held ratings in powered aircraft and airships.

In 1922 he designed the "Ente" tail-first two-seater sailplane and in the following years he produced the "Rheinland", which had a much greater span and had the form now



considered as classical: a shoulder-wing single-seater, of much higher aspect ratio, with a double swept wing.

In 1925 the Fulda Aachen "Eva" appeared to his design. In this case, he returned to the low-wing monoplane, but this time with a single skid, although, because it had a low wing, the skid had to be much more prominent than usual.

In 1922, Klemperer left Aachen and took over the direction of the development of the Zeppelin Company at Friedrichshafen. Here he did a great deal of valuable and interesting technical work and looked after the planning and carrying out of the flight tests on the LZ-126, which at the end of 1924 was flown to the U.S.A. and named the "Los Angeles".

While with Zeppelin he developed a large number of special instruments for use on or with airships, he did a great deal of work in the 3-metre wind tunnel on air loads and moments on airships, and on control problems of airships in free flight in turns and also when attached to a mast. From these investigations he formed his Doctorate thesis entitled: "The Airloads on an Airship from Model Tests".

In 1924, Klemperer went to the United States, with a group of Zeppelin engineers under Arnstein, to the newly-formed Goodyear Zeppelin Corporation, where they designed, developed and tested the airships "Akron" and "Macon". There Klemperer did a great deal of structural and wind tunnel work in connection with the strength and manoeuvrability of airships.

He did not give up his earlier interests in gliding and he founded a gliding group and assisted the Baker-Macmillan

Company in building the "Cadet" secondary glider. In the first high performance sailplane built in America, the "Condor", he made the first distance flight: 25 km in Western Pennsylvania. Following this, many flights were made in various States of the Union.

In 1930, Dr. Klemperer led a survey group to select a suitable site for a U.S. soaring competition. He recommended Elmira, New York, as its terrain features most nearly matched those of the Wasserkuppe in Germany. It was here that Dr. Klemperer assisted in founding The Soaring Society of America of which he was, for many years, a Director and Honorary Vice-President.

Toward the end of 1936, Klemperer was loaned to the Douglas Corporation for a few months to develop a pressure cabin for civil aircraft. His leave was extended so that eventually he spent 29 years with Douglas, where since 1958 he was Director of the Guided Missile Research Section, Staff Assistant to the Vice-President, and Director of Product Development.

The development of the pressure cabin brought many physiological problems as well as technical problems. He developed a number of techniques, instruments and methods of stressing in connection with these problems, and during World War 2 he developed a number of specialized optical and other instruments, and this development was actually the beginning of the Guided Missile Division of Douglas, from which a series of well-known weapons, such as Nike, Sparrow, Honest John and Thor were developed. Again he designed a number of specialized instruments, such as a high-speed wide-angle ciné camera, analogue computers and other equipment for data processing, including flight simulators.

His theoretical work led him into the realm of space navigation and he and his colleagues have contributed valuable work to the problem in recent years.

In California, he still took an interest in soaring. For many years he was Chairman of the Southern California Soaring Association and later Honorary President. He took a great interest in sailplane development along the coast and also in the inland desert, and guided, as Chief Engineer, the planning and operation of the "Sierra Wave Project" and the "Mountain Wave Project", which had as its object the investigation of high standing waves.

Two years ago he headed the Douglas Expedition to photograph a total eclipse of the sun. This was described by him in an article in the National Geographic Magazine. At the time of his death, Dr. Klemperer was active in planning for the next such expedition to the South Pacific in early summer.

Dr. Wolfgang B. Klemperer was honored in many ways. He was Honorary Doctor of Technical Sciences in the Tech-

nical University of Vienna, an Honorary Member of the Flight Technical Union of Aachen, a Fellow of the American Institute of Aeronautics and Astronautics, Fellow of the American Astronomical Society, and the British Interplanetary Society, among many other honours.

Among his most famous papers, as far as gliding is concerned, was that entitled: "Theorie des Segelfluges", published in Berlin in 1926, and re-published only a few years ago in English in the American magazine "Soaring".

Dr. Klemperer's interest in soaring never lagged. While visiting Italy last year, he made a soaring flight at Aeroporto Paolo Contri, site of the OSTIV International Gliding Research Institute at Varese.

Recently, Dr. Klemperer was honored by The Soaring Society of America which presented him its highest award, the Warren E. Eaton Memorial Award. In his acceptance speech he said: "I feel very humble about the fact that in my limited flying career I didn't amass as many hours, kilometers of distance and of altitude as many of you, my friends. But I retain pleasant memories of the challenging efforts of the early days of the birth of Soaring, when it all began".

We all regret the passing of this great scientist. He had an ever-broadening horizon, passing from gliders to airships to aeroplanes to space, covering everything and keeping to the forefront of knowledge. And yet, in spite of his complex and widening interests, he never forgot his first love, gliding and soaring, and always took an active part in its development.

Gliders designed by Wolfgang Klemperer

Type:	Blaue Maus	Ente	Rheinland	Eva
Date	1921	1922	1923	1925
Span (m)	9.5	12.0	12.7	11.5
Length (m)	5.0	6.0	5.6	5.7
Height (m)	1.5	—	1.25	—
Wing Area (m ²)	15.5	22.0	15.0	18.0
Aspect Ratio	5.8	6.4	10.8	7.35
Empty Weight (kg) . .	53	94	102	—
Load (kg)	75	66	70	—
All-Up Weight (kg) . .	128	160*	172	—
Wing Loading (kg/m ²)	8.3	7.3	12.0	—
Seats	1	2	1	1

* As single-seater.

No data on Schwarzer Teufel (1920) available.