



100 years since Oehmichen set the first FAI Rotorcraft record (all thanks to a dragonfly!)

Lausanne, Switzerland, 13 March 2024 – The biomechanical facilities of the dragonfly and its agility in flight were a major inspiration to Etienne Oehmichen, the French engineer who set FAI's very first helicopter record one hundred years ago, on 14 April 1924.

On this date, his Oehmichen 2 quadrocopter rose vertically into the air above Courcelles-lès-Montbéliard, France, and made a journey of **360m in a straight line**. Official observers had just witnessed the very first FAI helicopter record.

The race towards vertical flight

By the late 19th Century, the practical developments of the industrial era were enabling engineers to carry on where **Leonardo da Vinci's helical air screw design** left off. In the wake of post-WWI aeronautical progress, pioneering inventors from Italy, France, Russia, Scotland, the United States, Denmark and Spain clamoured to **tame aeronautical instability and propulsion to bring the triumph of vertical flight** to their nation.

Assisted by biology and photography

Oehmichen, a forward-thinking engineer at Peugeot, was one such pioneer, and he was armed with a special weapon in the race to victory: a camera. His invention of a camera capable of shooting 1,000 frames per second enabled him to **capture the precise mechanics of dragonflies** in flight. His findings helped him stay ahead of the game.

The Oehmichen 2

His rotorcraft was a **cross-shaped construction of metal tubing**. Lift was provided by four main two-bladed, counter-rotating rotors: two had a diametre of 6.5m and the other two were longer at 7.5m, and they rotated at 145rpm. Warping controlled the blade pitch. The addition of propellors spinning on the horizontal plane provided lateral stability, with steering controlled by a propellor at the nose. Forward propulsion was provided by a further two propellors.

The first FAI helicopter records

Oehmichen's first FAI record was also hailed as a major success in helicopter flight. Following the initial distance of 360m, the aircraft made a second, longer journey of 525m on 17 April 1924. His records were quickly superseded by **Argentinian engineer Pateras Pescara**, who, on 18 April recorded 736m, in his 2F 'The Marquis Pateras' in Issy-les-Moulineaux, near Paris.

Oehmichen went on to complete the first successful closed-circuit helicopter flight on 4 May 1924, flying the Oehmichen 2 around a triangular course of 1km. In September the same year, Oehmichen tested payloads for which he was awarded two further FAI records.

Serafina Ogończyk-Mąkowska, President of the FAI Rotorcraft Commission commented:

"That the FAI registers records - including that of Oehmichen's first helicopter record one hundred years ago - is crucial for documenting and preserving aviation achievements. FAI plays a significant role in ensuring the credibility and accuracy of aviation records, which helps in advancing the field by recognising outstanding accomplishments and pushing boundaries in aviation technology and performance."

Editor's note

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About FAI

FAI, the World Air Sports Federation, is the world governing body for air sports and for certifying world aviation and space records. The FAI was founded in 1905 and is a non-governmental and non-profit-making organisation recognised by the International Olympic Committee (IOC).

FAI activities include Aerobatics, Aeromodelling, Airships, Amateur-Built and Experimental Aircraft, Balloons, Drones, Gliding, Hang Gliding, Helicopters, Manpowered Flying, Microlights, Parachuting, Paragliding, Paramotors, Power Flying and all other Aeronautic activities and Space records.

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