

Aurel Vlaicu – The Brilliant Romanian Flight Pioneer 100 Years From His First Flight

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Romania has a long and rich tradition in the aviation field. At the beginning of the 20th century, flight pioneers like Aurel Vlaicu, Traian Vuia and George Valentin Bibescu brought important contributions to early aviation history, building revolutionary aeroplanes and changing the age's mentalities.

In the history of the aeroplane's invention, there are several brilliant Romanian characters like, for example, Traian Vuia – the inventor who designed, built and flew the first self-propelling heavier-than-air aircraft in Europe, in 1906 – or Henry Coanda – the inventor, aerodynamics pioneer and builder of the world's first jet powered aircraft, the Coanda-1910.

Among these visionary and enthusiastic aviation pioneers the Romanians count Aurel Vlaicu the avant-garde aeroplane constructor, inventor and aeroplane pilot.

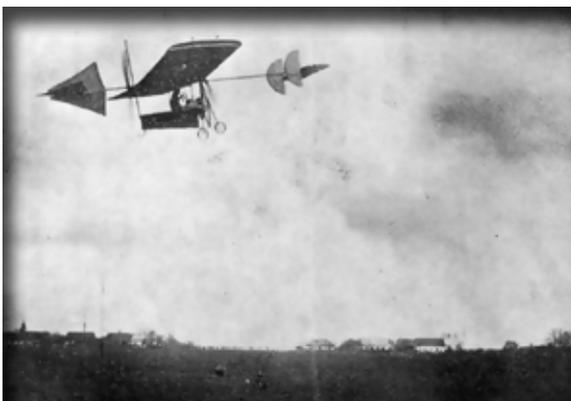
Aurel Vlaicu was born in Bințiinți (now renamed Aurel Vlaicu), near Orăștie, in Transylvania, the famous historical region of Romania. He was the eldest son of a respected family farmers. He attended Calvinist High School in Orăștie (renamed "Liceul Aurel Vlaicu" in his honour in 1919) which he graduated from in 1902.

Its remarkable competences in the fields of geometry and mathematics as its ambition to discover the secrecy of the flight drove him to register with the Technical University of Budapest. Dissatisfied with the lack of documentation concerning the flying machines, he left the university after two trimesters of study and he registered at the Ludwig-Maximilians University of Munich, which he graduated from in 1907.

The year 1908 found the young man Aurel Vlaicu working as an engineer for Opel in one of the German car producer's factories in Rüsselsheim (Germany) where he was very appreciated for his exceptional inventiveness, his intuition and dexterity. One of his most precious dreams was to build a flying machine for its country. Therefore, Vlaicu returned to Romania and – even with limited financial means and facing numerous bureaucratic difficulties and strong rivalries – built a glider with which he undertook a series of flights.

The successes achieved with the glider encouraged him to build with the Arsenal of the Army in 1910 an original, arrow-shaped aeroplane, with flight controls in front, two coaxial propellers, a ring around the engine, and independent suspension-tricycle-landing-gear with brakes. Vlaicu called his first prototype aeroplane Vlaicu I, and he succeeded in making it flying without any modifications to the first design, which was exceptional for that time. This aeroplane would become, in the autumn of that year, the first Romanian military aeroplane. Vlaicu would perform with his aeroplane a few missions during some military exercises held in the autumn of 1910.

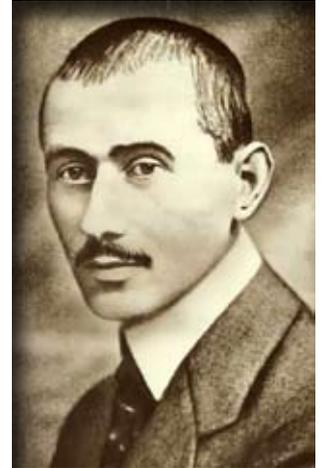
On 17th of June 1910 on Cotroceni field, near Bucharest, Vlaicu took off for the first time, flew for approximately 40 meters at 3-4 meters height and landed swiftly. This flight is one of the most important events in the Romanian flight history.



During the summer of 1910, Vlaicu flew several times at heights exceeding hundreds of meters and lengths of several kilometres. From that summer, his aeroplane could have competed with the best aeroplanes in the world.

He started to perform demonstrative flights in different places throughout Romania for the pleasure and excitement of thousands of Romanians amazed of what he was able to do in the air with his marvellous aeroplane. In one of those flights, near Brașov in Transylvania, he flew at 1000 meters with 90 km/h.

During 1910, on board of "Vlaicu I" and, one year later, on board of the second aeroplane "Vlaicu II", which he personally



designed and constructed, Aurel Vlaicu was able to demonstrate his aeroplanes remarkable flying performance.

Using his second aeroplane "Vlaicu II", he entered the June 1912 international flight competition held in Aspern - Vienna. He was awarded the first prize for target launching, and four second prizes, one of which for steady point landing. Due to his achievements during the competition, the press of that time considered Aurel Vlaicu the second pilot of the contest after the famous French aviator Roland Gaross.

In contrast with the foreign aeroplane constructors', his aircraft design solutions originality resided in the arrow-shaped body, the front placement of the depth rudder and of the low rudders, the variable elevation aeroplane wing adopting, during the flight, the form closest to the optimum, a tandem propeller, which, because of their rotation opposite to one another, had a mutual compensation of the torsion couple, the existence of a detachable undercarriage, and of a speed reduction unit between the aircraft engine and the propeller. Open field of view for the pilot, no matter the course of flight, was characteristic of his own made aeroplanes.

Encouraged by the successes achieved with his aeroplane and stimulated by similar unprecedented attempts like the famous Louis Bleriot's English Channel crossing in 1909, Vlaicu took the courageous decision to cross the Carpathian Mountains from the southern part of the country to Transylvania.

Pressed by the gossip that two other Romanian pilots were about to attempt that crossing, he didn't wait for the finalization of the third prototype "Vlaicu III" – his design of the years 1912-1913 that was to be the first all-metal aeroplane in the world – and took his chances with the old and by then worn aeroplane "Vlaicu II". Sadly, this hasty and uncharacteristic decision would cost him everything. On 13th of September 1913, aboard his "Vlaicu II", while he was attempting to cross the Carpathians he made – according to two of his best friends and witnesses to the accident statements – an unfortunate flying mistake and he crashed down near the village Banesti.

At the time of his death, the two-seated monoplane "Vlaicu III", ordered by Marconi's Wireless Telegraph Co. Ltd. for experiments with aerial wireless radio, was only partially built.

After Vlaicu's death the plane was completed by his good friends Giovanni Magnani and Constantin Silisteanu, and several short experimental flights were made during 1914. Further tests were hindered by the unusual controls of the aeroplane which no other pilot was familiar with.

According to some rumours, in 1916, during the German occupation of Bucharest, "Vlaicu III" was seized and shipped to Germany, and it seems that the aeroplane was last seen in a 1942 aviation exhibition in Berlin.

In 1948, Aurel Vlaicu was elected member post-mortem of the Romanian Academy and a postage stamp representing his portrait and a design of his first aeroplane was printed in 1953, 40 years after his death. To honour his remarkable contributions to the development of the world aeronautics, the biggest airport of Bucharest as his native village (in the past Bintinti) are today named after Aurel Vlaicu and a memorial museum was established in his native house.



This year, on 17th of June, the Romanians will proudly celebrate 100 years from the memorable first flight performed by this avant-garde engineer, inventor, aeroplane constructor and pilot, one of the world's first pioneers of modern aeronautics.