

## SHORT HISTORY OF HUNGARIAN AVIATION

The first small, hydrogen-filled experimental balloons (1784) are associated with the names of István Szablik and József Domin.

In 1811, while traveling as a passenger on a gas balloon from Budapest to Gyöngyös (70 km), Dr. Menner dropped to earth various small domestic animals with little silk parachutes, unharmed.

The first Hungarian balloon, the "TURUL", filled with lighting gas, rose with its two passengers to 4040 metres (13,255 feet) on its first aerial journey (1902) and landed smoothly.

David Schwarz (1850-1897) said: "Dirigible aero-navigation can be attained with a rigid body of metal construction." In 1897 his truss girder structured airship, covered with aluminium sheets, achieved a speed of 35 km/h (56 mph). A Prussian officer as a "test-pilot" controlled the maiden flight.

Lajos Martin (1827-1897). A university lecturer, he became the first outstanding aeronautical experimentalist known worldwide. He suggested the use of aileron-surfaces in dynamic aviation. In 1893 his hovering wheel model, which applied one of the technological solutions of today's helicopters, reached completion.

In 1896 Béla Tóth gave notice for the first Hungarian patent for an aeroplane.

The first aeronautical journal, the "Repülő- Hírlap " ("Aero News") appeared in 1893, and in 1902 the first professional journal, "The Aëronaut" was published. In October 1910, the reformed Hungarian Aero Club was accepted as a member of the Fédération Aéronautique Internationale (FAI). In June 1910, it organised international air-races in Budapest.

1909: Blériot flew over the English (La Manche) Channel and following that, held his first demonstration flight in Budapest the same year.

Ágoston Kutassy (1879-1932). Owner of the Hungarian No.1 pilot certificate, he sacrificed almost all his possessions and bought, during the summer of 1909, a French (Far-man) aeroplane to show

it at home. RÁKOSMEZŐ, 1909: The cradle of Hungarian aviation. Here the first two wooden booth-hangars were built. At the 1910 International Air-Race already 16 (plus 24 temporary) hangars stood at the disposal of the local Hungarian and the 29 competitors from abroad. The first 3 flying pioneers

started from here, flying successfully, small, Hungarian-built, light monoplanes: János Adorján (1882-1964). The first Hungarian pilot to fly in this country on his own, selfdesigned aeroplane (1910).

Ernö Horváth (1883-1943). Won the National Prize on the 2nd International Air-Race in Budapest. He started flying in 1910, but after a crash he withdrew and engaged himself only in design and

building. His book, "The Flying Engine" became the textbook of Hungarian and Austrian flying schools.

Aladár Zsélyi (1883-1943). Famous for his innovations. At the time of the international race he had already flown 3 - 4,000 metres (1800-2500 miles) distances on a circular course. His machine was

"the first Hungarian aeroplane constructed by an engineer with a master degree." In 1912 he designed the plan of a 500 h.p. Aerobus to carry 34 passengers. Later, in 1912-13 he experimented with primitive gas turbines as a new source of power for aeroplanes. In 1913 he passed the pilot examination in Wiener-Neustadt, Austria, built a fast plane considered as modern for a 66 kW engine - but crashed at its test flight and died of tetanus infection.

Mihály Székely (1885-1959). His achievement won a distinguished place in the history of Hungarian aviation. In 1911, he flew with a Pischhof-monoplane (60 h.p. ENV motor) from Wiener Neustadt to Budapest (240 km). This was the first long-distance flight by a Hungarian. He won second prize in altitude and third prize in speed at the National Air Race in 1913.

Géza Kolbányi (1863-1936). He was one of the aeroplane and aero engine designers of the initial stage of Hungarian flying from 1909. The Kolbányi-Galcsek 6-cylinder, 60 h.p. air-cooled, fan-type engine was the most valuable part of his first machines. József and Kálmán Tóth. Two young mechanics. Their machine was the first completely covered, plywood stressed-skin structured plane in Hungary.

Sándor Svachulay (1875-1954). Dedicated his whole life to experiments in man-powered flying machines. He built one of his first planes "ALBATROS" with a boat hull: this was the first Hungarian experiment with an amphibian.

András Kvasz (1884-1974). Worked from 1909 as a mechanic at Zsélyi's aero-experiments. He built several planes of his own from 1911 and was an outstanding pilot, the most popular in the country at the time.

Dedics brothers, Ferenc (1874-1929) and Kálmán (1877-1969). Pioneers of Hungarian aeroengine manufacture from 1909. Kálmán studied in Germany. He built the first aeroplane engines between 1909-13, when the manufacture of planes was still in its infancy everywhere. He was the first to apply the 6-cylinder radial-engine which caused a sensation in 1911, as it produced 44 kW output with a mere 62 kg (137 lbs) mass. Later, the brothers switched to the production of 7-cylinder rotary engines.

Gyula Minár won with it their greatest success, the first prize, in 1914 at Pöstyén at the Austro-Hungarian air-race.

Mór Bokor (1881-1942). At the initial stage of flying, he experimented in America. In 1909 he built a machine for the airship-school there and won the \$500 Arlington prize with it. In 1910 he continued working at home.

Sándor Pfitzner (1880-1910). An American-Hungarian pioneer who graduated at the Hungarian University of Technology. In 1910 he flew 216 km (134 miles), reaching a height of 1100 metres (3600 feet) within 2 hours.

Lilly Steinschneider (1891-1989?). The first Hungarian woman pilot. She received, in 1912, the No.4 pilot certificate.

Antal Lányi came to Rákospuszta in 1911 and became well known by his flight over Lake Balaton, the largest lake in Central Europe.

Létai brothers, Sándor, Lajos, András came to the forefront of Hungarian aeronautics by their up-to-date constructions. Their most successful aeroplane

(1913) was a monoplane with closed fuselage powered by a radial-engine, without the common single-skid undercarriage.

Between 1914-18, the Hungarian aircraft industry (established here by the Austro-Hungarian Monarchy) began developing. The 3 greatest: Hungarian Aircraft Factory (1914), Hungarian

General Aircraft Factory (1916) and Hungarian Lloyd Aircraft and Engine Factory (at Aszód - 1916). At Aszód, Tibor Melczer designed types according to his own imagination. 287 aircrafts were built during the war: fighter planes, bombers and reconnaissance planes.

The first air-to-air combats produced heroic fights with many tragic losses, among them one of the most famous and most successful fighter-pilot of the Monarchy, József Kiss, holder of 3 Gold, 4 Great Silver, 5 Small Silver Medals of Valour (with 19 victories, most of the enemy planes **forced down on our airfields - unharmed**).

In 1914, at the 3-day Schicht Air Race between countries of the Monarchy, out of 10 entrants, 3 were Hungarian. The winner, Viktor Wittmann won European fame for himself and shining glory for Hungarian avionics: he flew 1092 km (679 miles) within 15 hours, 50 minutes, 18 seconds. István Petróczy, colonel, played an important role in organising amateur-flying after the 1st World War.

In 1921 the Sporting Flying Club of the University of Technology (MSrE) was set up. Three of its most famous founders: Árpád Lampich (1898-1956). An open-minded construction engineer and pilot, prime mover of the MSrE Club, played a leading role in the rebirth of Hungarian aeronautics in the early 20s.

Lajos Rotter (1901-1983). While still a university student, achieved outstanding international success with his dissertation for a Swiss helicopter competition. Later, with his glider "KARAKÁN" (1934) he broke the Hungarian distance and duration records with 276 km (171.5 miles) and 24 hrs 14 minutes flights respectively, scoring in 1935 the first international victory for Hungarian gliding. At the 1936 Olympics, with his masterpiece "NEMERE" he flew a 336 km (209 miles) goal-distance world record to great international acclaim. In 1937 the FAI established the golden ISTUS ring for outstanding work in glider sport - this was awarded for the very first time to Lajos Rotter.

Ernő Rubik (1910-1997). Aircraft engineer, (father of the inventor of the magic cube), was the creator of Hungarian sail-plane mass production which enabled pilot training in large numbers. He designed 24 sail plane archetypes, 5 motor-powered planes, 4 glider UL-aircrafts. Over 1000 of his machines were produced.

Antal Bánhidi (1902-1994). Became world famous by both his aircraft designs and his performance as a pilot. His plane "GERLE" achieved considerable international success. In 1933 with Tibor Bisits on "GERLE 13" they flew round the Mediterranean Sea, equal to 12,500 km (7769 miles), in 100 hours, 22 minutes. The moral success of this journey was significant; all known aviation journals mentioned it. The aircraft was rebuilt as an old-timer, and is still flying today.

Károly Kaszala (1891-1932). His world records: in 1927 he flew non-stop for 9 hours 21 minutes in a circular course on his light, low-performance

machine. In 1928, he flew with the same plane to Rome, where they painted its later name ROMA on the aircraft. With this plane (L-2 Roma) its designing engineer Árpád Lampich made 1022 km (635 miles) in 16 hours - another world record!

In 1930 Hungarian patriots in the US and Canada set up the Hungarian Transatlantic Flight Committee to enable Hungarian pilots to make a transatlantic flight. Lord Rothermere helped by

offering a prize and he decided to name the aircraft "JUSTICE FOR HUNGARY." György Endresz was invited to be the pilot for this historical flight. In the summer of 1931, at the focus of international interest, he made the 5,800 km distance with his navigator, Sándor Magyar in record time (26 hours 20 minutes). This successful flight evoked immense international acclaim.

1938-1945 The Royal Hungarian Air Force took part in the war against the Soviet Union, alongside with the Finnish, Slovakian and Rumanian air forces, and in the later stages of the war defended the country as best as they could, against the vastly superior Allied Air Forces too.

Tódor Kármán (1881-1963). World famous aerodynamicist, one of the greatest scientists of our age. In 1912 he was commissioned to organize and manage the Aeronautic Research Institute in Aachen, Germany. During the 1st World War he already designed a tethered observation helicopter. In 1926 he was invited by the California Institute of Technology to organise the Guggenheim Aeronautical Laboratory in Pasadena, of which he became the director in 1930. His scientific work is preserved in over 100 scientific papers and books. He created the Theory of Edge Surface and in connection with this, the theory for the design and measurement of wing surface for supersonic flights. Based on his results he is regarded as the father of supersonic flight. In 1963 he was the first to receive the greatest scientific award of the United States, the National Medal of Science. He was also holder of the Prandtl Memorial Ring, the Watt International Medal and the Gauss Medal. His chief works were published in all major languages.

Péter Besenyey (1956-). The most successful Hungarian powered aerobatic pilot of all times, many times Hungarian, European and World champion. To this day, an active member of the FAI World

Grand Prix powered aerobatic pilot team, holder of several Gold Medals, and one of the most sought after airshow pilot of Europe.

In 1962 the FAI awarded the right to organise the Second World Aerobatics Championship to Hungary. There József Tóth (1933- ), glider pilot, holder of a golden diploma with one diamond, became overall world champion. This was an achievement never before attained in Hungarian sport flying, and constitutes the most shining pages of Hungarian civilian flying history. In 1966 József Tóth also became the Hungarian national champion.

In 1980, of the two fully trained Hungarian astronauts, Béla Magyar and Bertalan Farkas, the latter flew into space by the spacecraft Soyuz-36 (on board Salyut-6 space station).

In 1999 in Fairford, England, Maj. Gyula Vári, accompanied by Peter Kovács, won for the second time the prize awarded for the best solo

demonstration flight of military pilots. Controlled maneuvering flight beyond the stall limit with the X31 as test vehicle.

By Ms Mária Kovács. With special thanks to Mr. Attila Szabo and Mr. Gábor Fekecs.