

GALLERY OF PRESIDENTIAL AIRCRAFT IN THE MUSEUM OF AVIATION IN KOŠICE

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Summary

The Article deals about definitely the most unique and the most valuable exposure in the Museum of Aviation in Košice, which is the Gallery of presidential aircraft. It describes origin of the Gallery of presidential aircraft and architectural and structure design of the building. It clarifies by individual exhibits, which donated the museum by the representatives of various countries of the world. It compares of the Gallery of presidential aircraft with competitive museums, which situated in cities Prague and Krakow.

Keywords: Gallery of presidential aircraft, Museum of Aviation in Košice, exposure, exhibit, aircraft

1. INTRODUCTION

Air transport is although the youngest, but the fastest is developing kind of the transport infrastructure, resulting in also ever-increasing the number of candidates, who search various aviation sport events or visit museum dealing with aviation with the aim either to expand their knowledge in this area or, take a pleasant aesthetic experience. This option offers also the Museum of Aviation in Košice, through its exposure spaces, in which visitor can examine collection of the aircraft engines, aircrafts and instrumentation. The unique exposure, which is subject of the article, is a Gallery of presidential aircraft. It origins mainly thanks initiative and support the former president Slovak Republic Rudolf Schuster, who received several originals predominantly military aircrafts. Collection is unrivaled its kind, because the exhibits are presents, which were donated to the museum heads of the fifteen different states of Europe, United States of America and China, this gives rise to the very name of exposure. Such collection of presidential presents can boast the Museum of Aviation in Košice as the only among the all other museums on the world dealing with aviation.

2. THE MUSEUM OF AVIATION IN KOŠICE

2.1. The History

Since 1948, when originated then the Technical Museum, today the Slovak Technical Museum, competent people played around with idea establish in the Slovak Republic museum dealing with aviation. As first and of course the most important it was needs resolved question, where the museum will be located. Candidates were several, but the winner and answer on the most important question, was city Košice. About the location of the museum decided several factors, based on which was on 23 August, 2002 for the first time officially accessible the public the Museum of Aviation in Košice,

which is branch store of the Slovak Technical Museum. The main objective of the museum for visitor is visually elucidating development of the aviation from first attempts person fly until aviation equipment of the current time.

2.1.1. Exposure of the beginnings of aviation to year 1945

Exposure, comprising from collection of the original aircraft engines, is represented piston inline, starry, water and air cooled engines developed during the First World War and in inter-war period. Parts of collection are the stronger piston engines used in the Second World War, rocket engine and the first serial made jet engine on the world. Exposure is supplemented by models and replicas of the aircraft. On display is collection of propellers made from different materials.

2.1.2. Exposure since 1945 until present

New development direction after the Second World War suggested development of jet engines, at the beginning used in military aircrafts, later also in a civilian aircrafts. Collection of the piston and jet engines presents Czechoslovakia Company Walter. Part of the exposure is the first serial made helicopter in a Czechoslovakia HC-102, agricultural aircraft Z-37, Soviet aircraft MiG-21 and no unpowered facility Šohaj Z-25. The most significant success Czechoslovakia aviation in the mid-20th century presents aircrafts L-200 Morava and sailplane Blaník.

2.1.3 Exposure of instrumentation industry

Objective of the exposure is for visitor of the museum elucidating development instruments on deck and aircraft systems. Interesting presentations is panel of the construction of the oxygen system and collection radio technical equipment, which were use in aircraft L-39 Albatros. Remarkable exhibits are part of the simulators of the military aircrafts Su-25 and L-29. In exposure has representation aviation meteorology, which emphasize importance knowledge this issue in term of the safety of air navigation.

2.1.4. Exposure of road transport

In the area of the Museum of Aviation is exposure of the road transport, which was establishment based on successful cooperation between the Slovak Technical Museum and the Veteran Club Cassovia Retro Košice. Collection consist from historical passenger car also trucks, motorcycles and bicycles especially Czechoslovak production, which are in operable state and participate different ride and exhibitions. Between the most unique belong cars Tatra 57, Chevrolet, Opel Kapitan, Praga Picolo a Citroen, which were made in the first mid-20th century yet. From collection of the motorcycles are the most interesting ČZ Jawa a Jawa Minor Roadster.

3. GALLERY OF PRESIDENTIAL AIRCRAFT

3.1. The History

One of the five exposures of the museum, which is contents of this article and which will concentrate the largest attention, is newly built Gallery of presidential aircraft. It was opened on 2 September, 2006 at ceremony resumption of the Museum of Aviation in Košice, which was for extensive reconstruction and construction closed nearly three years. Construction of gallery cost approximately 930 000 euro, and immediately after upon completion became dominant of the whole museum. As already the name implies, these are the exhibits, which were donated to the museum heads of the individual states. The museum these presents obtained mainly thanks the large initiatives and international contacts former president Slovak Republic Rudolf Schuster, who managed to got

originals aircrafts from several states of the Europe, United States of America and China. Mainly merit Mr Schuster is Gallery of presidential aircraft unmatched by not only in Slovak Republic, but also on the whole world. In exposure is 19 presidential presents, one aircraft MiG-29A, which was borrowed with the consent of the Military History Institute Bratislava perhaps permanently, and one helicopter Mi-24D, which transmitted to the museum customs office Slovak Republic. Exhibited is 16 predominantly fighter aircraft, three helicopters and one ballistic missile. Exposure is supplemented about aircraft Polikarpov PO-2, which is stored in depository. Reason is operable state to imply fear about possibly damage.

3.2. Architectural and construction design

The Museum of aviation is located in area of the Airport Košice in part, which fulfils task hangar space for aircraft used for training of the future pilots. Exhibits are arranged in metal hangars type Pícha shaped „E“, in which are exhibited exhibits sensitive on the weather conditions, and in covered area, which got its name Gallery of presidential aircraft. This covered area is located between metal hangars, which demarcate it from three sides, and is open towards the runway, from where is the optimal approach for import a new exhibit. Area for presidential presents is nearly a square base with central column and it is divided on eight parts. Four corner parts symbolize propeller and next four central parts symbolize parachute. Spiral staircase located in central column offers opportunity of the outlook on exhibits in three height levels. Design from construction aspect is in use canvas materials for covering surfaces, which are joined with steel lattice tubular construction rope rods. Architect focused mainly on it that was disposition question resolve the smallest quantity stanchions in inside covered area. This resulted placed stanchions to the perimeter on the centre. Central support construction is solution four tube columns. Whole construction is covered canvas Ferrari précontraint 1302 Fluotop T2. Due to elimination the possibility of rust were used gripper materials on canvas made from antikor.

3.3. Exhibits on display in Gallery of presidential aircraft

The first official present, which began built presidential gallery, is fighter aircraft Su-15 TM. This present donated to the museum on 6 June, 2001 Ukrainian president Leonid Kučma. The next exhibit is present of the Polish president Aleksander Kwaśniewski, aircraft Polish production TS-11 Iskra bis D. To the museum was imported in disassembled state and after assembled it was delivered on 16 January, 2003 ambassador of the Republic of Poland. Iskra was the first jet training aircraft developed based on request of the Polish Air Force. On airport in Košice landed military transport aircraft Lockheed C-130 Hercules on 14 August, 2003. Aircraft transported from base on Rimini present of the Italian president Carlo Azeglio Ciampi. This fighter-bomber F 104 Starfighter was transported in disassembled state, but nevertheless Italian technicians assembled this aircraft for twenty hours. The first aircraft, which arrived from donor and landed on the Airport Košice on 22 October, 2003, was Mirage III RS. Aircraft served on the implementation of surveys. Because of fog and bad weather conditions arrived from German base Dübendorf three days later as was planning. Swiss technicians aircraft before exposure dysfunctional. Present donated to the museum president of the Swiss Confederation Kaspar Villieger. The ceremony effected on 31 October, 2003 on the highest presidential level, where present Swiss and Slovak delegation were. The second present of Ukrainian president Leonid Kučma was model international ballistic missile, who donated to the museum on 4 January, 2003. This is a three-stage missile with name 15Ž61, which was part of system RT-23 UTTCH Molodec (in code NATO “SS-24 Scalpel“), which was produced in Dnepropetrovsk on Ukraine. The second aircraft, which landed on airport in Košice, and ranked among the exhibits of the museum, was fighter-bomber Phantom F-4F. After landing German technicians dismantled armament from it. The present donated president of the German republic Johannes Rau. It was solemnly handed over from ambassador of Germany on 27 February, 2004. President of the Hellenic Republic J. E. Constantinos Stephanopoulos donated to the museum on 26 April, 2004 fighter and bomber aircraft Northrop NF-5A. Tactical fighter-bomber Mirage III E donated to the museum president of the French

Republic Jacques Chirac on 26 April, 2004. Aircraft officially delivered defence attaché French Republic. The oldest aircraft in presidential gallery is all-purpose biplane PO-2, present of president of the Russian Federation Vladimir Putin. To the museum it delivered 24 August, 2004 from counselor of the Russian Embassy. It delivered in operation capable state, because it was renovated in the Moscow Company Rusavia for two years before arrival. Reconnaissance aircraft Saab AJSF 37 completed last flight on 7 September, 2004, when it landed on airport in Košice and enriched expanding exposure Gallery of presidential aircraft. It was present of the Swedish King král'a Carl XVI Gustaf. The ceremony was 11 September, 2004, where was present director the Swedish Museum of Aviation and ambassador the Kingdom of Sweden. Before exposure in gallery was from aircraft dismantled engine. The Museum of Aviation in Košice obtained from the United States of America supersonic training aircraft AT-38B Talon. It imported from the National Museum of the United States Air Force resident in city Dayton in state Ohio. It delivered US Ambassador to the Museum in Košice on 13 September, 2004. In Gallery of presidential aircraft is category of helicopters. The first from this category is present of the Belgian King Albert II., light all-purpose helicopter SA318C Alouette II. The present delivered to the museum ambassador of the Kingdom of Belgian and military attaché 14 October, 2004.

The unique exhibit of presidential gallery is aircraft Nanchang Q-5, which donated Chinese president Ĥiang Ce-min. It is unique in that, it is single its kind, which is in Europe on display. It transported at first by ship to the Amsterdam, and then by automobile transport to Košice, where Chinese technicians assembled it. The ceremony was on 18 November, 2004, where aircraft delivered to the museum Chinese ambassador and military and air attaché. Q-5 is a one-seat fighter and bomber aircraft, which was developed in Chinese manufactory in province Nanchang based on aircraft J-6 "Farmer", Chinese copy of soviet aircraft MiG-19. Driving unit formed two engines Shenyang, which were derivative from Soviet engines Tumansky. Aircraft was produced since 1969 and used especially for the China Air Force. Next users were Bangladesh, North Korea, Myanmar, Pakistan and Sudan, where were aircrafts exported with name A-5. Production definitely finished in year 2002. During this time was produced more as 1000 aircrafts. It used only during the day; if was a good meteorological conditions, and used on destroy ground targets, vessels, which was on surface, and on scramble. In these hostilities were used armaments, which were comprised from two guns Norinco with 200 cartridges. It situated in wing root. On pylon could bear 1700 kilogram armaments, which were comprised from missiles and bombs. Aircraft is interesting in that, its identity was western intelligence units unknown to the year 1980 although it was in operation already ten years. Version Q-5 used China on test of nuclear bomb in year 1972.



Figure 1 Nanchang Q-5

About Kirghiz helicopter is a lot of uncertainties mainly for that, it was not presidential present. Experts of OSN found, that group of smugglers from Liberia tried obtain two helicopters this type. Kirghiz military attaché has helped them. He agreed with the Aviation Repair Company Trenčín, where should be helicopters modernized and submitted overhauls although already were sold Guinean Company. One of them got permission leave from country after repair. If they found, that helicopter not return to Kirghizia, they detained second helicopter on Airport Sliach. By law, helicopter became property of customs office Slovak Republic, which it delivered to the museum. There was transported in year 2004.

The next exhibit from category of helicopters is all-purpose helicopter UH-1M Iroquois, which donated American president George W. Bush through the Indiana National Guard. It was transported to Košice by accompanying aircraft of President Bush at summit Bush-Putin in Bratislava. The

ceremony was on 18 March, 2005, on which helicopter delivered to the museum chief of the Indiana National Guard in the presence of the Embassy of the United States. Historically, it is one of the most successful helicopters, which ensured implementation of reconnaissance, transport of soldiers, searched and saved people, evacuation injured, protection and support at hostilities. It was developed by the Company Bell Helicopter in years 1962-1976 based on request of the United States Army. It was produced more as 16 000 pieces in all versions. At first name of helicopters was HU-1, based on was name "HUEY". In collection is exposure version UH-1M, with better turboshaft engine Lycoming, which was equipped system for night vision, search engines searchlight and new weapon system on destroy ground targets. It was produced in year 1966 and could transport except dyadic crew next twelve passengers. Helicopters UH-1M are known from the Vietnam War, where were deployed in year 1962. During war America lost 2 519 these helicopters, but interesting is, that only 1 211 helicopters were lost in fight. Experts think, that the rest of 1 380 helicopter was lost exactly because frequent using, resulting a mistakes and failures of crew. Although statistics show reliability of helicopter, because one loss is equal to 8 000 take off.



Figure 2 UH-1M Iroquois

On the occasion of opening of Gallery of presidential aircraft on 2 September, 2006 was part of a rich program festive delivering fighter-bomber Su-22M3, which donated Hungarian president Lázsló Sólyom. It delivered to the museum State Secretary of Department of Defence of the Republic of Hungary. Extraordinary present to the Gallery of presidential aircraft is presented the Republic of Romania, which government donated subsonic aircraft IAR-93A. To the Košice was transported in disassembled state from Romanian base in city Craiova in October, 2006. Romanian ambassador and military attaché delivered aircraft to the museum on 10 May, 2007, then if we recall the end of the Second World War and liberation of Slovak nation, for what we thanks also Romanian soldiers. The next exhibit from remarkable construction company Saab is present of the Austrian Federal President Heinz Fischer, fighter aircraft second generation J-35ÖE Draken. Ambassador of Republic of Austria delivered aircraft to the museum on 29 October, 2008. At first was in exposure aircraft An-2, which donated the Federal Republic of Germany. On aircraft in year 2008 fell part of roof and damaged it and then it could not stay in exposure. Therefore museum on 29 October, 2008 adopted aircraft the same type, present of Honorary Consul of Ukraine Stanislav Obický. It exposure in original form, in which it flew on regular flights until summer 2013, when it was on request Rudolf Schuster dyed on red in the form, in which was exposure previous aircraft. The second exhibit, which is not presidential present, but is in the collection, is fighter aircraft fourth generation MiG-29A. To the museum was borrowed with the consent of The Military History Institute Bratislava. It transported on 13 May, 2013 convoy of military trucks from air base Sliač. The last exhibit of Gallery of presidential aircraft, which donated Hungarian premier Viktor Orbán on the occasion of eighties birthday of Rudolf Schuster, is transport aircraft Il-18D. To the museum was imported on 23 November, 2014 by military trucks of the Slovak Republic, which transported wings, propellers and engines. Fuselage transported Hungarian Transport Company.

4. COMPARISON OF MUSEUM OF AVIATION IN KOŠICE WITH COMPETITION

4.1. The Aviation Museum Kbely

The first object our comparison is aircraft TS-11 Iskra bis D, which museum obtained in year 2014 by way of exchange for aircraft L-29 Delfin between the Military History Institute in Prague and the

Polish Aviation Museum in Krakow. This is version bis D, which is also in the museum Košice. Next aircraft is Phantom F-4M, which same as Phantom in Košice landed on airport, where is the museum and it was included among exhibits. Aircraft donated to the museum the Royal Air Force in year 1992. Difference between aircrafts is that, version with name F, which is in presidential gallery, was produced for the German Air Force with engines General Electric, and version with name M was produced for the Royal Air Force with engines Rolls-Royce Spey. In exposure is Northrop F-5E Tiger II, which museum obtained from Vietnam on study in year 1981. Produced was in Unites States of America. Interesting is to the museum arrived together with armament. Northrop, which is in the museum in Košice, was produced in Canada. The next exhibit is Polikarpov CSS-13. This is type of aircraft PO-2, which was produced in Poland after the Second World War. It is exposure in original form and to the museum arrived from Polish airport as present Polish Aeroklub in year 1972. Main difference between aircrafts is that, PO-2 in presidential gallery is operational, but CSS-13 is static exhibit. In the Air Museum Kbely is exposure helicopter Mil Mi-24DU, which used the Czech Air Force. To the museum was transported in year 2011. Version DU is training version of combat helicopter Mi-24D, which is in collection too and at the same time, is also in the museum in Košice. This training version was produced without armament and space of weapon system operator took instructor. From the Swedish Air Force museum obtained aircrafts Saab AJSF 37 Viggen. This is also in exposure in Košice and Saab J-35J Draken. It distinguishes from version J-35ÖE, produced for the Austria Air Force, which is in the museum in Košice, in particular by, that it has longer life, modern avionics and increased fuel capacity. In year 2013 was transported to the museum in Prague aircraft Sukhoi Su-22M4, formerly used by the Czechoslovakia Air Force. From version M3, which is in presidential gallery, distinguishes outside change of input of air to engines. Version M4 had as first computer through that managed of navigation and weapons systems. The last compared exhibit is Ilyushin Il-18B. Aircraft used by Czechoslovakia Airlines and it was able to transport 84 passengers. To the museum was transported in year 1979. This aircraft on airport Prague-Ruzyne had a collision with aircraft Tupolev Tu-134 in year 1977. Fortunately no one was hurt. In the museum in Košice is version Il-18D, which was able to transport only 65 passengers.

4.2 The Polish Aviation Museum in Krakow

Same as in the Air Museum Kbely so also in the Polish Aviation Museum in Krakow is exposure several aircrafts same with aircrafts in Gallery of presidential aircraft. The first is TS-11 Iskra, which has representation four aircraft in different version especially since these aircrafts was produced in Polish Republic. One is a present of Polish acrobatic group, aircraft TS-11 Iskra MR, which used since 1988. This version had a modern avionics. The next aircraft are both in same version TS-11 Iskra bis B, which used for training of pilots, but after armed were fighter version. The last from this type is fighter and reconnaissance aircraft TS-11 Iskra bis DF. In presidential gallery is training and fighter version bis D. From the Italy Air Force obtained museum in December, 2008 Lockheed F-104 Starfighter S ASA-M. The same version of this aircraft is in the museum in Košice too. Northrop F-5E Tiger II, from the Vietnam war, was produced in the United states of America. It was captive and sent to the Poland on technical research in year 1975, after which later went to exposure of the museum in Krakow. As previously we mentioned at the museum in Prague, difference between aircrafts is that, Northrop, which is situated in the aviation museum in Košice, was produced in Canada. The next valuable exhibit is Polikarpov U-2LNB, which was produced for night hostilities. Since 1945 aircraft used the Polish Air Force, which it after disposal donated to the museum of transport. Later went to the aviation museum. Basic version PO-2, which is in exposure in Košice, was used as training aircraft and it is still operational. Museum in Krakow the same as Museum Kbely presents two aircraft, which obtained from the Swedish Air Force. The First, which is also in museum in Košice, is Saab AJSF 37 Viggen. On airport in Krakow landed in year 2005 and ranked among exhibits. The second is Saab J-35J Draken, which distinguishes from Draken in Košice in country, where it was used, increased fuel capacity and modern avionics. Sukhoi Su-22UM3K is two-seat training version, which construction is deduced from one-seat version M3, which is in presidential gallery in Košice. Difference between

exhibits is that, version M3 has not wing pylon. Except this training version are in collection the next two aircrafts Sukhoi Su-22M4, which was used in the Polish Air Force since 1985. In year 2008 was to the museum transported MiG-29UB. This is two seat training and fighter version, which museum bought from Germany for one euro. Difference between exhibits is that, fighter version MiG-29A in aviation museum in Košice is one-seat version. Type of aircraft An-2 presents WSK An-2R and WSK An-2TD, which was produced in Poland. Version An-2R was used at agriculture and An-2TD was landing aircraft for twelve parachutists. In Gallery of presidential aircraft is on display version An-2P, which was able to transport 10 passengers in isolated and heated cabin.

5. CONCLUSION

The presidential collection consists of 19 exhibits, which donated to the museum presidents or government officials from different countries of the world. Collection supplements also two exhibits, which were not present, but they are situated in exposure. After several visits of the collection we reached the conclusion that exhibits are in very good state from outside mainly thanks construction of the covered area, which was too expensive, but purpose definitely fill.

We allow say that constantly spread of this collection or other exposures would result increasing number of the candidates, which would mean higher attendance of museum. The current situation from view of the attendance is enough low in comparison with competitive museums, which are situated in Prague and Krakow. We think that problem is mainly in quantity of exhibits and promotion of museum. Promotion could be achieved by arranging different air sports events, which would attract to the museum candidates how is it for example in the Aviation Museum Kbely. There is aviation day at open a new season in last years, where presents mainly operational exhibits of the museum. The all these activities are especially question of money and therefore we believe, that the Museum of Aviation in Košice will please favour at least as up to now.

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