

AIRPORTS AND THEIR INFRASTRUCTURE

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THE 50th ANNIVERSARY OF THE AIRPORTS DEPARTMENT OF AIRPORTS FACULTY OF THE NATIONAL AVIATION UNIVERSITY (1969-2019)

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Abstract

The article is devoted to the history of 50 years of foundation of the airport department of the faculty of airports of National Aviation University (1969-2019). The information about the first deans of the Airports Faculty is represented. Since December 1969, the airports department under the leadership of its first head, Doctor of Technical Sciences, Professor V.I. Blochin has begun its work as profile and graduation department for the training of specialists in the specialty "Construction of aerodromes". Under his leadership, the first curriculum of the Airports Faculty and the curricula of special disciplines were developed, the team of teachers was formed, the first manuals were published and technical means of training were created. Within a short period of time the department created and equipped training laboratories for building materials, engineering networks of airfields, engineering geodesy and aerogeodesy, engineering geology, soil science and soil mechanics, the study of research and design of airports. Graduate designing at the department was based on the assignments of airlines. During 1972-1992, 786 diploma projects (including 138 foreign students) were defended, many of which were put into real airfields operation. The staff of the airport department is represented by photo of 1979 and nowadays the department having a new name of airports and highways reconstruction is represented by photo of 2010. During all its history the department was headed by: associate professor Belinsky I.O. (1979-1999), associate professor Talanov G.P. (1999-2000), associate professor Shinkarchuk M.V. (2000-2001), professor Veryuzhsky Yu.V. (2001-2002), professor Tsikhanovsky V.K. (2002-2008), professor Bieliatynskiy A.O. (from 2008 to present day). Scientific and teaching activities at the department are performed by highly qualified teachers: 4 professors and 7 associate professors. The teachers of the department are the authors of many textbooks, manuals, monographs and normative documents on design as well as the operation of highways and airfields. In addition, the department cooperates closely with various educational, research, design, civil engineering and airlines enterprises of Ukraine and abroad: UkrNDIProektStalonstruktisiya, Ukravtodor, Boryspil and Kyiv International Airports, as well as universities of Lithuania, Latvia and Germany. NAU graduates work at airlines in Ukraine and numerous countries in Europe, Asia, Africa and America.

Keywords: 50th anniversary of foundation of airports department; airports faculty; staff of the department; scientific and teaching activities; the graduates

1. Introduction

The Airports Faculty (FAP) was established in 1968 to train civil engineers and mechanical engineers. The first dean of the faculty was the head of the department of descriptive geometry and graphics associate professor O.G. Litavrin. At that time the faculty consisted of two departments: Descriptive Geometry and Graphics and Labor Protection, headed by Ph.D., Associate Professor L.A.

Burichenko. Then the FAP was headed by: Associate Professor G.M. Geletukha (1970-1981), Associate Professor V.S. Sukhobrus (1981-1983), Professor L.A. Burichenko (1983-1986), Associate Professor V.M. Pershakov (1986-1992), Professor A.I. Bileush (1992-2002).

In December 1969, the profile and graduation department of the airports for training specialists in the specialty "Construction of aerodromes" was

formed owing to great organizational activities of Eng.D., Professor V.I. Blokhin invited from the Leningrad Military Engineering Institute named after Mozhaysky A.F.

2. Main part

Blokhin Vitaliy Ivanovich was born on January 29, 1917 in the Omsk region of the Russian Soviet Federal Republic. Since 1934 he has been a student of the Robfac and then a student of the Siberian Highway Institute. He served at the Leningrad Academy named after A.F. Mozhaisky for about 17 years. In 1952, he was awarded the Ph.D. in Military Engineering and in 1963 - Eng.D. In 1970 he was approved as a professor [1].

From 1969 to 1979 he held the position of Head of the Airports Department, and in the following years - Professor of the Department.

Under his leadership, the first curriculum of the Faculty of Airports was prepared, the curricula of special disciplines were developed, the staff of teachers was formed, the technical means of training was developed, and the first manuals were published (including "Designing the surface of the ground part of flight strips of aerodromes", "Designing the surface and constructions of aerodrome paving").

He has lectured the subjects "Civil Aviation Airports and Flight Safety" and "Surveying and Designing of Airports".

He was the research supervisor of one of the main lines of investigations assigned to the KIECA. A number of scientific results obtained with his participation and under his guidance have been incorporated into the regulatory documents for aerodrome designing.

He was the chairman of the Specialized Council of the HAC of the USSR at the KIECA, a member of the Specialized Council of the HAC at KHI, a member of the Expert Commission of the HAC for Military-Engineering Specialties (1967-1969) and a member of the Specialized Transport Council of HAC (1975-1978). He was the editor-in-chief of the interuniversity collected papers "Designing, construction, mechanization and operation of airports".

He had more than 90 scientific papers. Among them is "Grading of Airports" (1978); "Formation of the personality of the engineer in high school" (1982); Airports and Airways (1984); "Fundamentals of Airport Design" (1985); "Fundamentals of Aviation Engineering and Airport

Equipment" (1986); "Airfields of civil aviation" (1993), and foreign publications [1].

The first teachers of the department were Ph.D. A.A. Domashevsky, G.M. Reminets, I.O. Belinsky, Yu.M. Kryvenko, B.F. Sotnichenko, V.S. Sukhobrus, I.V. Tshiprianovich, G.I. Bannik, engineers V.G. Vakulenko, and A.F. Dankevich.

Within a short period of time a lot of training laboratories were organized and equipped in the department, such as: "Building materials", "Engineering networks of airports", "Engineering geodesy and aero geodesy", "Engineering geology", "Soil science and soil mechanics" and study room of surveying and designing of airports. At the same time, the department had begun the development curriculums and preparation of educational and methodological literature. The first publications were: "Designing of the runway surface" (V.I. Blokhin, 1972), "Guideline for the diploma designing of airports (I.A. Belinsky, 1972),"Programmed guideline for the designing of grading of the ground part of airfield runways" (I.V. Tshiprianovich, 1972). Professor V.I. Blokhin and associate professors I.A. Belinsky and I.V. Tshiprianovich have made an important contribution to the department during initial period of its formation. In 1972-1992 more than 50 publications of educational literature of a total volume of 240 author's sheets were prepared at the department. Several of them were published in the central publishing houses: "Airports and airways" ("Transport", 1976, textbook, V.I. Blokhin, I.A. Belinsky, I.V. Tshiprianovich, G.N. Geletukha); "Grading of Airports" ("Transport", 1978, V.I. Blokhin); "Winter maintenance of airfields" ("Transport", 1982, I.A. Belinsky); " Airfield Operation " ("Transport", 1990, I.A. Belinskii, I.V. Tshiprianovich, G.P. Talanov, G.M. Reminets) and others. In 1989, a large organizational and teaching and methodological work was done at the airports department to develop the ICAO Course 109 "Technical Operation of Airfield Covering and Runways" for interns at ICAO, whose training was conducted for the first time at the Kyiv Institute of Civil Aviation Engineers. In 1989-1990 texts of all lectures in English were published (the total volume was about 480 pages).

The use of computers in the educational process was the special part of department's activity. Aerodrome design programs were developed and used (calculation of earthwork quantities, wind loads and runway capacity, width of runway elements,

drainage systems, etc.). The development of automated teaching systems for the department disciplines has been started at 1990.

Diploma designing was conducted at the department mainly on the requests of the airlines. In total, 786 diploma projects (including 138 foreign students) were defended at the department for 1972-1992, many of which were used in practice.

Since 1975, the department has been performing a number of research works by the request of the former MCA, the results of which were realized in

the normative documents used for airfield designing. The scientific results of the researches were introduced in the Building Code "Airfields" (1980 and 1985), "Manual for the Designing of SA Airfields Grading" (1981), "Guidelines for Designing of Civil Aviation Airfields (in elaboration of the Building Code SNiP 2.05.08-85) (part III, 1986, Part 1, 1987). The scientific results were published in 1988 in the ICAO Bulletins and two scientific papers in the Airport Forum (Germany) in 1990 and 1991 [1].



Fig. 1. The department staff in 1979 (from left to right): the upper line - assistant V.M. Zolotoperyi, head of laboratory O.G. Kudryavtsev, assistant V.S. Tymoshenko, head of laboratory I.O. Skripay, assistant M.V. Shinkarchuk, senior laboratory assistant N.E. Yudina, head of laboratory V.O. Shcheglov, assistant A.I. Zakrevsky; the down line – associate professor Y.M. Krivenko, associate professor I.O. Belinsky, head of department professor V.I. Blokhin, senior teacher A.F. Dankevich

In 1986-1991 the department's teachers received 16 copyright certificates for inventions. According to the results of scientific activity in 1981 the research team of the department took the first place among the research departments of the whole institute. In 1989 the research work of the department "Development of scientific basis and introduction into practice of methods and design standards for airfield, which provided a significant efficiency increase of capital investments in the development of the country's airfield network" (research works cycle for 1975-1988) This work was nominated by the Institute for the State Prize of Ukraine in the field of science and technology. Fourteen postgraduate students and candidates of the department (including V.M. Zolotoperyi, M.V. Shyncharchuk, I.M. Plish, A.I. Zakrevskiy) defended their Ph.D. dissertations. The department staff paid great attention to the research work of students who received more than thirty diplomas of aviation

branch and republican competitions. At that time the department consisted of 11 teachers, including one doctor of science, professor and 8 Ph.D, associate professors. The department maintains permanent creative and business relations with universities, research institutes, design organizations and airlines both in Ukraine and in the countries of former USSR.

From 1972 to 1992, the airport department trained about 1000 specialists for civil aviation of the former USSR and many foreign countries. You can meet the graduates of the department and faculty in more than 30 countries abroad. FAP graduates work in Vietnam, Cuba, Mongolia, Nepal, Sri Lanka, Cambodia, Laos, Nigeria, Cameroon, Cape Verde, Angola, Syria, Haiti, Madagascar, Algeria, Mauritania, Libya, Czech Republic, Slovakia, Hungary, Poland, Ethiopia, Yemen and other countries.

The department is constantly in touch with alumni. Many of them hold high posts in various

airlines (up to 1992): Anokhin, Chief of Sheremetyevo-2 airfield; I.M. Mikhailov – Deputy Commander of the St. Petersburg United Flight; V.V. Goncharov, Deputy Commander of Boryspil United Flight; P.I. Lipovenko, Chief Engineer of Boryspil United Flight; P.A. Zakharov – member of the Civil Aviation Department of Ukraine; S.M. Karatayev, Head of Airport Service at Roshchino Airfield (Tyumen); M. Abdurakhmanov– Deputy Chief of Kazaeroproject; Yu.A. Kirilov – First Deputy Commander of United Flight and Chief of the Ekaterinburg Airfield; V.B. Kadzanaya – Deputy Commander of Tbilisi United Flight; M.A. Davydov is a member of the Civil Aviation Department of Belarus [1].

The department of airports called now as the department of airfields and highways reconstruction was headed in different years by: associate professor I.O. Belinsky (1979-1999), associate professor G.P. Talanov (1999-2000), associate professor M.V. Shinkarchuk (2000-2001), professor Yu.V. Verjuzhsky (2001-2002), professor V.K. Tsikhanovskyi (2002-2008), professor A.O. Bieliatynskyi (2008 - nowadays).

In 2001, the Airports Department was merged with the Airports Buildings and Structures Department. The merged department of airports was headed by Doctor of Technical Sciences, Professor V. Yu. Verjuzhsky. In 2002, three new departments were created on the basis of the merged airports department: the Department of Airfields and Highways Reconstruction, the Department of Computer Technologies of Construction, and the Department of Land Management and Cadastre.

The Department of Airfields and Highways Reconstruction was headed by Doctor of Technical Sciences, professor V.K. Tsikhanovskyi. In 2008, the department has been headed by Doctor of Technical Sciences, Professor A.O. Bieliatynskyi, who is the current Head of the Department. The department is graduate department and provides training of specialists of different educational and qualification levels in the field of modern designing technologies of construction, reconstruction and operation of various objects and their engineering networks.



Fig. 2. The department staff in 2010 (from left to right):

the upper line – O.I. Pylypenko, S.M. Talakh, M.V. Berezivskyi, S.Yu Timkina, O.V. Stepanchuk, M.M. Velichko, V.S. Stepura, M.S. Barabash, M.P. Zhdanovich, A.V. Vishnevskaya, D.E. Prusov, N.I. Blandova, S.M. Vardovsky;
the down line – Y.M. Kryvenko, G.F. Zelenkova, V.K. Tsikhanovsky, A.O. Bieliatynskyi, V.M. Pershakov, O.G. Serova

3. Conclusions

The staff of the Department of Airfields and Highways Reconstruction in 2019 has the following composition: Bieliatynskyi Andrii Olexandrovych,

head of the department, doctor of technical sciences, professor, academician of the Transport Academy of Ukraine, academician of the Engineering Academy of Ukraine, honorary road builder of Ukraine;

Pershakov Valerii Mykolayovych, doctor of technical sciences, professor, academician of the academy of civil engineering of Ukraine; academician of the academy of engineering of Ukraine; Stepanchuk Oleksandr Vasylyovych, doctor of technical sciences, associate professor; Mykhailo Pavlovich Zhdanovich, Ph.D., professor; Oleksander Ivanovich Pylypenko, Ph.D., associate professor; Tetiana Volodymyrivna Khimerik, Ph.D., associate professor; Victor Stepanovych Stepura Ph.D., associate professor; Svitlana Mykhailivna, PhD, associate professor, academician of the Academy of Civil Engineering of Ukraine; Svitlana Yuriiivna Timkina, senior lecturer; Oksana Sergiivna Chernyshova, Ph.D., associate professor; Oleksander Mykolayovych Dubyk, Ph.D., associate professor; Alina Volodymyrivna Vyshnevska, assistant; Kateryna Mykolayivna Lysnitska, assistant; Nadiya Ivanivna Blandova, head of laboratory.

The department teachers are the authors of many textbooks, study books, monographs and normative

documents on designing and operation of roads and airfields. In addition, the department cooperates closely with various educational, research, designing and manufacturing firms of Ukraine and abroad: UkrNDIProektStalkon-struktsiya, Ukravtodor, Boryspil and Kyiv International Airfields, as well as universities of Lithuania, Latvia and Germany. The diploma papers and projects are defended not only in the National Aviation University, but also on the territory of the above mentioned Ukrainian institutions, which guarantees a further 100% employment of graduates. The general and special subjects are conducted at a high educational and methodical level using advanced teaching methods. Leading specialists of Ukraine take part in the educational process.

References

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А.О. Белятинський¹, В.М. Першаков², А.І. Білеуш³, О.І. Пилипенко⁴ До 50-річчя заснування кафедри аеропортів факультету аеропортів національного авіаційного університету (1969-2019рр)

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Стаття присвячена історії 50-річного заснування кафедри аеропортів факультету аеропортів Національного авіаційного університету (1969-2019рр). Приводяться відомості про перших деканів факультету аеропортів. З грудні 1969 року почала свою роботу профілююча та випускова кафедра аеропортів для підготовки фахівців за спеціальністю «Будівництво аеродромів», в організації якої велика заслуга приналежить першому завідувачу д.т.н., професору, інженеру-полковнику В.І. Блохіну. Під його керівництвом було підготовлено перший план факультету аеропортів, розроблені навчальні програми спеціальних дисциплін, створено колектив викладачів, видані перші навчальні посібники, створені технічні средства обучения. За короткий строк на кафедрі були створене та обладнане навчальні лабораторії будматеріалів, інженерних сітей аеропортів, інженерної геодезії та аерогеодезії, інженерної геології, ґрунтоведення і механіки ґрунтів, кабінет вишукування і проектування аеропортів. Дипломне проектування на кафедрі велося по заявкам авіапідприємств. За 1972-1992 роки було захищено 786 дипломних проектів, (в тому числі 138 іноземними студентами), багато з них впроваджені в виробництво. Колектив кафедри аеропортів, (в статті приведено фото 1979 та 2010 років), а нині кафедри реконструкції аеропортів та автошляхів в різні роки очолювали: доцент Белінський І.О. (1979-1999), доцент Таланов Г.П. (1999-2000), доцент Шинкарчук М.В. (2000-2001), професор Верюжський Ю.В. (2001-2002), професор Цихановський В.К. (2002-2008), професор Белятинський А.О. (2008-наступний час). Наукову та навчально-методичну діяльність на кафедрі здійснюють висококваліфіковані викладачі: 4 професори, 7 доцентів. Викладачі кафедри є авторами багатьох підручників, навчальних посібників, монографій та нормативних документів з проектування, експлуатації автодоріг та аеродромів. Крім того, кафедра тісно співпрацює з різноманітними навчальними, науково-дослідними, проектними та виробничими підприємствами України та зарубіжжя: УкрНДІПроектстальконструкція, Укравтodor, Міжнародні аеропорти Бориспіль та Київ, а також університети Литви, Латвії та Німеччини. Випускники НАУ працюють на підприємствах цивільної авіації України та численних країн Європи, Азії, Африки та Америки.

Ключові слова: 50 років заснування кафедри аеропортів, факультет аеропортів, колектив кафедри, наукова та навчально-методична діяльність, випускники

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К 50-летию основания кафедры аэропортов факультета аэропортов национального авиационного университета (1969-2019гг)

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Статья посвящена истории 50-летнего основания кафедры аэропортов факультета аэропортов Национального авиационного университета (1969-2019гг). Приводятся ведомости про первых деканов факультета аэропортов. С декабря 1969 года начала свою работу профилированная и выпускающая кафедра аэропортов для подготовки специалистов по специальности «Строительство аэродромов», в организации которой большая заслуга принадлежит первому заведующему д.т.н., профессору, инженеру-полковнику В.И. Блохину. Под его руководством было подготовлено первый план факультета аэропортов, разработаны учебные программы специальных дисциплин, создан коллектив преподавателей, изданы первые учебные пособия, созданы технические средства обучения. За короткое время на кафедре были созданы и оборудованы учебные лаборатории стройматериалов, инженерных сетей аэропортов, инженерной геодезии та аэрогеодезии, инженерной геологии, грунтоведения і механики грунтов, кабинет изыскания и проектирования аэропортів. Дипломное проектирование на кафедре проводилось по заявкам авиапредприятий. За 1972-1992 годы было защищено 786 дипломных проектов, (в тому числе 138 иностранными студентами), большинство из них внедрено в производство. Коллектив кафедры аэропортов, (в статье приведено фото 1979 та 2010 годов), а сегодня кафедры реконструкции аэропортов и автодорог в разные годы возглавляли: доцент Белінський І.А. (1979-1999), доцент Таланов Г.П. (1999-2000), доцент Шинкарчук Н.В. (2000-2001), професор Верюжский Ю.В. (2001-2002), професор Цихановский В.К. (2002-2008), професор Белятинский А.А. (2008-настоящее время). Научную и учебно-методическую работу на кафедре выполняют высококвалифицированные преподаватели: 4 профессора, 7 доцентов. Преподаватели кафедры являются авторами многих учебников, учебных пособий, монографий и нормативных документов по проектированию, эксплуатации автодорог та аэродромов. Кроме того, кафедра тесно сотрудничает с различными учебными, научно-исследовательскими, проектными и производственными предприятиями Украины и зарубежья: УкрНДПроектстальконструкція, Укравтодор, Міжнародні аеропорти Бориспіль та Київ, а также университеты Литвы, Латвии та Германии. Выпускники НАУ работают на предприятиях гражданской авиации Украины та многих стран Европы, Азии, Африки та Америки.

Ключевые слова: 50-лет основания кафедры аэропортов, факультет аэропортов, коллектив кафедры, научная и учебно-методическая деятельность, выпускники

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