About the Institute of Aviation

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Tekst jest udostępniony do wykorzystania w ramach dozwolonego użytku.



ABOUT THE INSTITUTE OF AVIATION

The Institute of Aviation is one of the oldest research establishments in Europe, officially registered in 1926 although its roots go back to 1918. For eighty six years of its activity the scientists and engineers employed in the Institute of Aviation contributed remarkably to the development of the Polish economy and defence. Before the Second World War all Polish aircraft were constructed or tested in the Institute of Aviation in Warsaw.

In 2011 the Institute of Aviation was granted prolongation of its highest A category, conferred on research institutes. At present over 1500 engineers, scientists and researchers are employed by the Institute with nine hundred of them no more than 30 years old. Four new laboratories have been set up during the last 12 months, with one laboratory dealing with the pressure tests for equipment recovering crude oil and gas being second largest in the world.

The main fields of the Institute's activity are space technologies, aero and missile engines, materials technology, aerodynamics, composite technologies, design and test of aircraft constructions, nearfield noise, and research in the field of recovery of crude oil and gas.

The Institute of Aviation is a member of Polish and international research organizations. As of 2005, the Institute has become a partner in an AERONET - Aviation Valley project. It is a group comprising of several well positioned research units. In April 2008 the Institute of Aviation has been admitted to the Association of the EREA Research Institutes whose aim is to consolidate, coordinate and undertake joint incentives. On June 7, 2010, an international organization International Forum for Aviation Research (IFAR) was called into being in Germany, in Luebbenau. The Institute of Aviation, representing Poland, played an important role in its establishment, becoming one of its founders.

The Institute of Aviation organizes international conferences, symposiums, and is a moderator in the global research incentives.

The strategy of the Institute of Aviation is,To provide service in international market research. The world market means the highest competitiveness of the research services offered leading to the development of new technologies. Polish membership in the EU opened enormous possibilities of cooperation in the field of applied research and development work. The Institute cooperates on a grand scale with universities, research institutes, research centres and industrial labs in Europe, the United States, Asia, Australia and Africa. The Institute closely cooperates with the aviation industry world leaders such as: General Electric, Boeing, Airbus, Pratt&Whitney, Sikorsky, and Rolls-Royce.

The Institute comprises of four research centers:

Center of New Technologies (CNT)) is one of the four research centres of the Institute of Aviation. Their area of activity is R&D service for Polish and foreign enterprises aimed at improving the competitiveness of their products. The scope of work performed by NTC includes: aerodynamics, design and testing work on aircraft landing gear, testing piston engines, thrust breaking tests, flows testing, measurement of aircraft

noise, rocket propulsion and space technologies, biomedical engineering as well as design of composite and metallic aircraft structures and of technological instrumentation. The research work performed in NTC is carried out in the laboratories furnished with the most advanced research and measurement equipment in Poland. In the Space Technologies department work is carried out on new space propulsion, rocket structures and new ecological fuel. In 2008 the Adaptronic depart- ment was founded to carry out research in the field of biomedical engineering instrumental in computer aided cranial surgery. Research work is also carried out in the Applied Aerodynamics Laboratory and their five wind tunnels. In the wind tunnels of the Institute of Aviation almost all Polish aircraft and helicopters are tested.

Materials and Structures Research Centre (MSRC) is a research division concentrated on implementation of the most advanced technologies in the field of strength research of materials and aero engine subunits and some other structures working in the conditions of high mechanical loading in a broad temperature range. The centre was founded in 2004 as a result of a longstanding experience of the Institute of Aviation. The Centre comprises four laboratories: the Structural Tests Laboratory, the Non-Destructive Tests and Materials Properties Laboratory, the Materials Test Laboratory and the Fatigue Analysis Department, a significant number of certified tests place the MSRC centre in a leading position in Poland.

Net Institute is the most recent department in the Institute of Aviation, established in 2007. The most important aspect of NI activity as a consequence of its mission is to set up network structures and carry out R&D programs with their assistance, research service and implementation of innovative technologies. The scope of assignments includes commercialization of research outcomes, promotions and advertising activity in the aviation sector, setting up systems of know-how management, monitoring conditions and requirements in the aviation sector regarding its human resources, and building up its image as a dynamic partner in the world's aviation sector, organization of conferences and seminars both at home and abroad.

Engineering Design Center (EDC) was founded in April 2000 under a memorandum of agreement between the aircraft engines department of General Electric (GE Aircraft Engines) and the Institute of Aviation. EDC is one of several global GE establishments cooperating with such GE entities as GE Aviation, GE Oil&Gas and GE Rail. The Engineering Design Centre has been developing vigorously from its very conception. Engineers employed at the EDC concentrate on design and improvements of parts of aircraft engines, turbine ship propulsions, high power gas turbines, steam turbines. Moreover EDC carry out design work, analysis and provide technical support for machinery and equipment used in oil and chemical industry.

Library - The Library of the Institute of Aviation was founded in April 1926 and ranks as the topmost aviation library in Poland, considering its subject matter, assortment of collection and volume. The library contains 80,000 volumes, and together with the Polish and foreign periodicals gathered for many years it is one of the best supplied libraries for R&D establishments in Poland.

The core of the unique collection consists of: aviation, helicopters, aerodynamics, mechanics, strength of materials, mathematics. The library subscribes to some 70 Polish and foreign periodicals, and contains over 5,500 microfilms of scientific papers and publications.

Scientific Publications. The Scientific Publications Division of the Institute of Aviation regularly publishes papers and books by leading Polish and foreign scientists, engineers - specialists in the field of aviation, employees of the Institute of Aviation as well as some authors employed in some other establishments and organizations connected with aviation. Distinguished Polish scientists from leading universities and scientific organizations review every book, paper or information to be published so as to ensure the highest quality of every publication. The Publishing Division has four groups of publications: Scientific Library of the Institute of Aviation, Transactions of the Institute of Aviation; Journal of Polish-American Science and Technology, and the Institute of Aviations Publisher's History Series. An advanced model of promotion and marketing is implemented aimed at creating communities interested in the subject of aviation and the Institute of Aviation.

In 2008 the Institute of Aviation started the national programme "The Age of Engineers". This is a programme for promoting the engineering professions and technical sciences. It is addressed to gymnasium and high school students. A modern programme of promotion and marketing enables the use of activities which create communities around aviation topics and the Institute of Aviation.

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