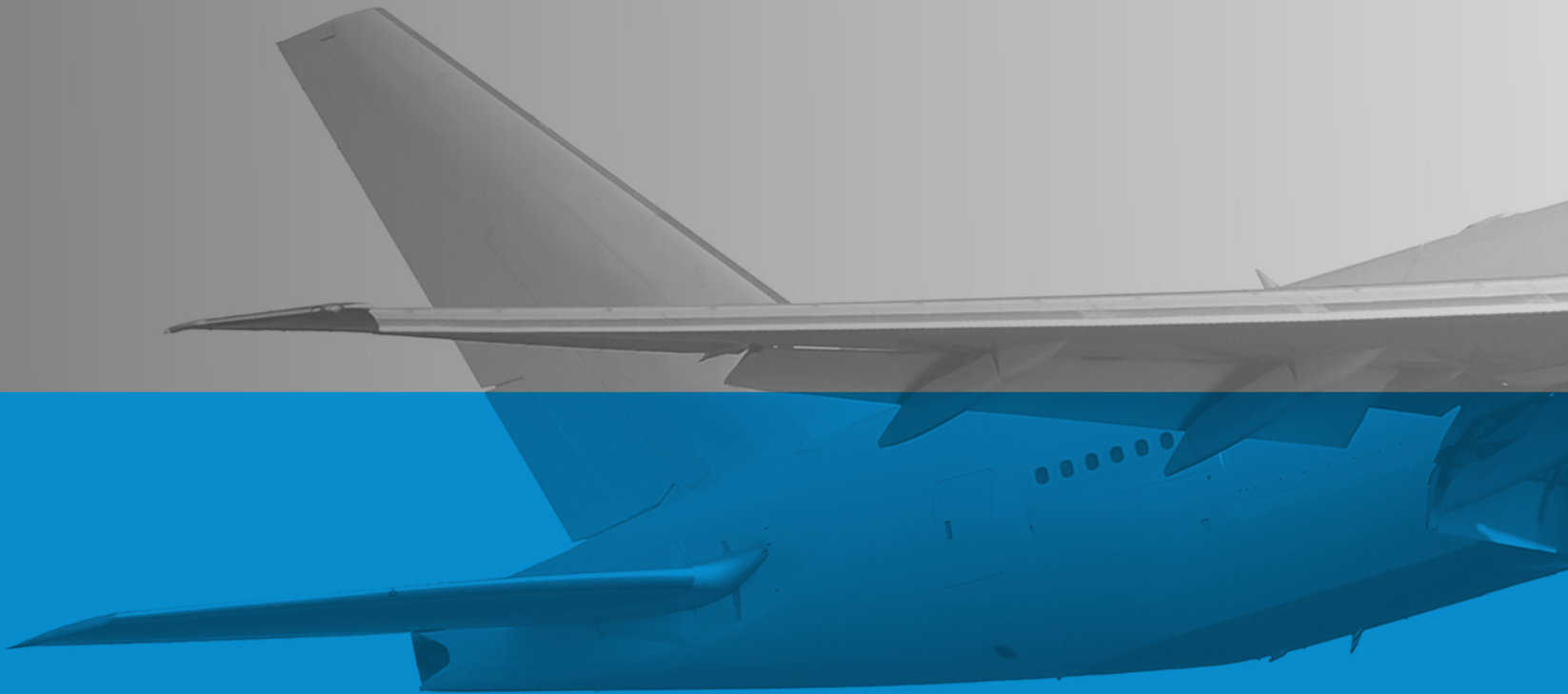




AVIATEST
LNK AEROSPACE





Flexibility in Strength Testing



ABOUT US

AVIATEST Research and Testing Centre, which is a part of an aerotechnical branch of the LNK Group holding company, specialises in static, fatigue and full scale tests for entire aircraft as well as for individual assemblies and structural components. AVIATEST also perform tests for airport equipment and various building structures.

What sets AVIATEST apart from other experimental centres is that all tested aircraft have an operation time close to the original service limit.

After Latvia gained independence, the enterprise managed to not only sustain a traditional bond with Russian aerotechnical manufacturers, but also execute structural fatigue tests for Western manufacturers. The company is certified to perform tests on aviation technology produced both in the European Union (LVS EN ISO/EC 17025:2005) and in the Russian Federation (IAC AR).

In recent years, AVIATEST specialists have conducted static and endurance tests for almost all civil aviation airframes and helicopters. As a result, the structures were improved and the service life of the aircraft was extended. Today AVIATEST is the only laboratory in the Baltics, which conducts full-scale structural and service life testing of aircraft.

At various time periods, tests have been performed on numerous airplanes and helicopters from the testing of samples to full scale (Mi-26, Mi-38, Ka-62 and SSJ-100 etc.). Our unique laboratory has a staff of more than 60 people which consists of highly motivated specialists, among whom there are those with PhDs, highly qualified engineers, mechanics and IT specialists. Modern multichannel loading systems, testing systems and an automated data management system are used in the testing process.

AVIATEST is currently contracted to perform a whirl tower test of the PRGB (AgustaWestland) and Rotor (Airbus Helicopter) in the European Project NICETRIP.



ALEKSANDER MILOV

Founder and a Chairman of AVIATEST,
D. Eng. Sc.



GEGAM HANAMIRJAN

General Director of LNK Aerospace

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LNK AEROSPACE

LNK GROUP

Calculation, testing and maintenance
of aviation equipment



CENTRE COMPOSITE

JOINT VENTURE OF LNK GROUP AND PROGRESSTECH

Strength analysis of the most important
components of aviation equipment constructed
from composite materials.



AVIATEST

LNK AEROSPACE

On-site testing of aviation equipment.



AVIATECHSERVICE

LNK AEROSPACE

Repair and maintenance of civil aircraft.



AVIATECH BUREAU

LNK AEROSPACE

Organisation and support of the
international aircraft certification.

TURNOVER OF THE ENTERPRISE



TOTAL AREA OF THE TEST HANGAR

5500 M²

QUANTITY OF THE TEST RIGS FOR FULL SCALE TESTS

30 +

HIGH-PRECISION MANUFACTURING MACHINES

5

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AVIATEST Research and Testing
Centre. Riga, Latvia.



LNK AEROSPACE
LNK GROUP

Calculation, testing
of aviation equipment



CENTRE
JOINT VENTURE

Strength and
components
from components



AVIATEST
LNK AEROSPACE

On-site testing



AVIATEST
LNK AEROSPACE

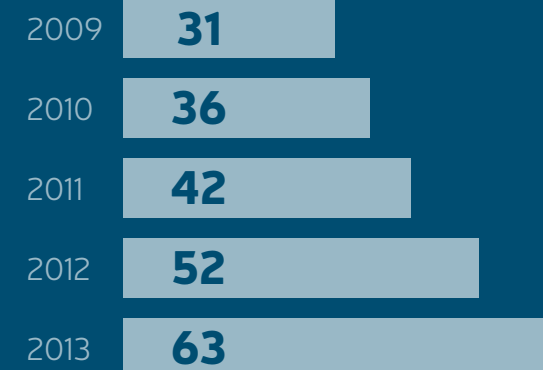
Repair and maintenance



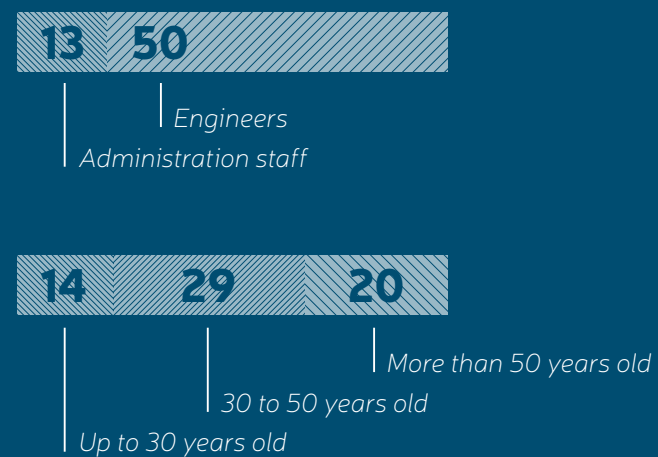
AVIATEST
LNK AEROSPACE

Organisation
international

THE NUMBER OF EMPLOYEES



OUT OF 63 WORKERS



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AVIATEST Research and Testing
Centre. Riga, Latvia.

OUR TEAM



ALEKSANDER
SOROKIN

Trial and Research Director,
D. Eng. Sc.

Flexibility and realism in problem solving during the testing of aviation equipment. We prolong the service life of aeroplanes and helicopters while making them safer.



ALEKSEI
NASIBULLIN

Executive Director, D. Eng. Sc.

It is important to remember those who created this unique enterprise. Working in AVIATEST is an investment of each employee in the development of the company!



FARIT
NASIBULLIN

Technical Director, D. Eng. Sc.

Going to work in an excellent mood every day for 38 years is priceless.



KRISTINA
SOSKOVEC

Commercial Director

We sell a perfect blend of cost and quality and our reputation confirms it.



VLADISLAV
TURKO

Deputy Executive Director for
Science, D. Eng. Sc.

Here in AVIATEST we put science into life.



ALEKSEI
KULAKOV

Head of the Technical
Control Department

Sound experience of our specialists and modern innovations guide us in our project work.



MAKSIM
SMOLJANINOV

Executive in charge

One of the main characteristics of the AVIATEST employee is striving for progress.



VLADIMIR
GORGUC

Executive in charge

Our work in AVIATEST is based on one of Aristotle's principles: "It is better to complete a smaller part of the work perfectly than complete it badly but do ten times more."



PAVEL
SREBRJAKOV

Executive in charge, D. Eng. Sc.

AVIATEST is an enterprise of high-standards. Our completed projects speak for themselves.



ALEKSEI
CHEPUSOV

Executive in charge

The main goal of the Project Leader is to achieve the goal of the Customer and provide an end result, as well as successfully supervise the project from its conception to full completion.



ALEKSANDER
NEVSKIJ

Executive in charge

One of the main conditions for project success is strict quality control during all stages of its realisation.



ALEKSANDER
LIMARENKO

Executive in charge

Aviation is one of the most magnificent creations of human engineering genius. Every time you see those metal birds – they take your breath away.



Endurance tests of a Sukhoi Superjet 100 fuselage front section.

Sukhoi Superjet 100 aeroplane.



AIRCRAFT TESTING

AVIATEST Research and Testing Centre performed structural tests for airframes such as the Il-18, Yak-40, Yak-18, An-24I-18, Yak-40, Yak-18, An-24. The laboratory also tested the airframe of a Tu-134 (both A and B), high-lift wing of a Tu-334, fuselage and a high-lift wing of an SSJ-100 and components of an MS-21.



Test rig for high lift on the semispan wing of a Sukhoi Superjet 100 airplane.



Arrangement of the fuselage sections of a Sukhoi Superjet 100 and MS-21 airplanes at the AVIATEST Research and Testing Centre.



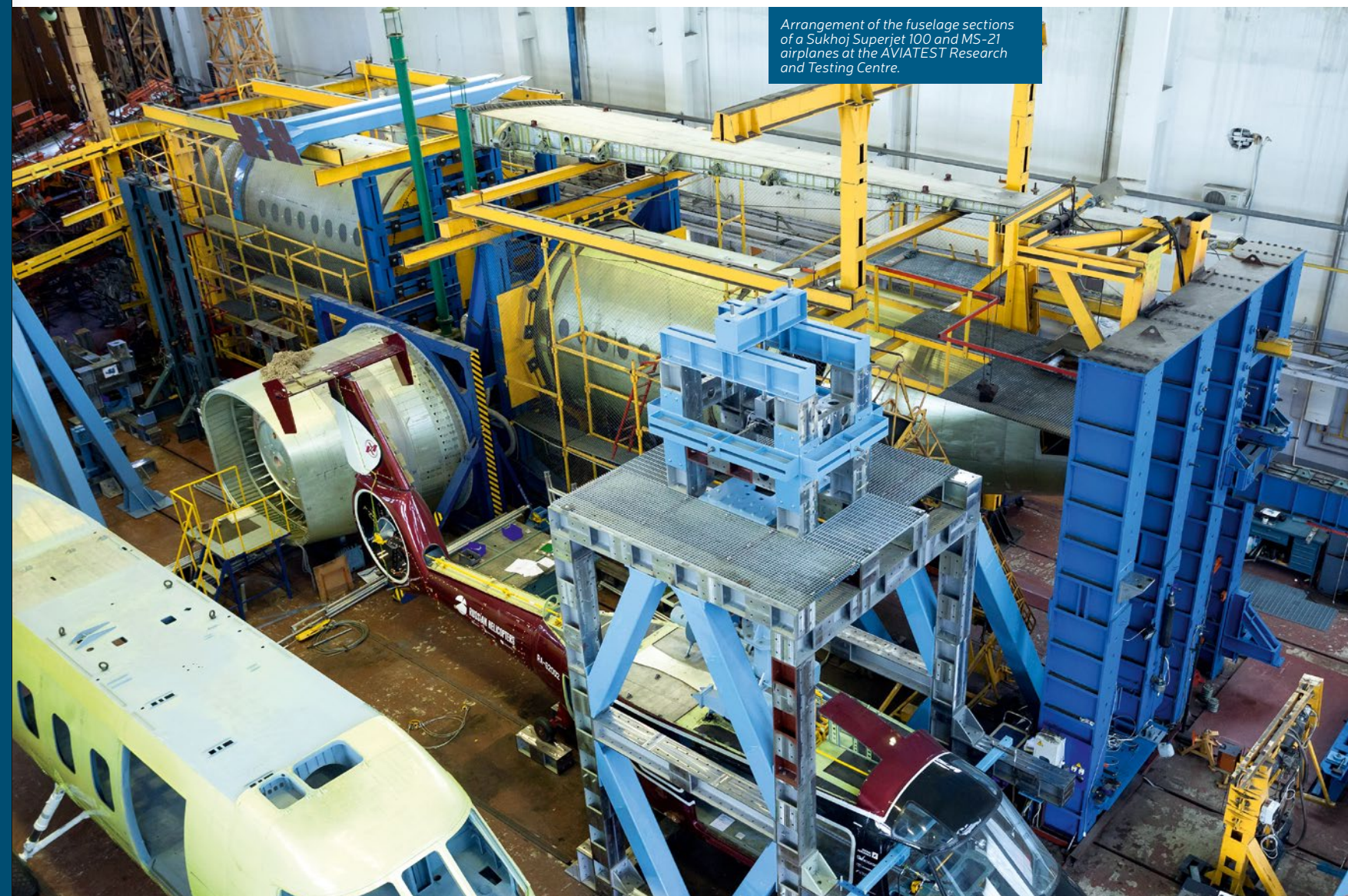
Endurance tests of a Sukhoj Superjet 100 fuselage front section.



Sukhoj Superjet 100 aeroplane.



Test rig for high lift on the semispan wing of a Sukhoj Superjet 100 airplane.



Arrangement of the fuselage sections of a Sukhoj Superjet 100 and MS-21 airplanes at the AVIATEST Research and Testing Centre.



Fuselage of a Ka-62 helicopter is placed on a test rig for static trials of ground loading.

Design of the Ka-62 helicopter.



HELICOPTER TESTING

AVIATEST Research and Testing Centre at present, has been commissioned to plan and execute structural fatigue tests for helicopters such as the Mi-1, Mi-2, Mi-4, Mi-6, Mi-38, Mi-26, Ka-126 / 226 and Ka-62. In recent years, the laboratory has been performing the testing of helicopter units and aggregates for the major European manufacturers AgustaWestland and Airbus Helicopters that are also cooperating with us within the international NICETRIP programme.



Test rig for fatigue tests of the full-scale fuselage and tail boom of an Mi-26T helicopter.



Arrangement of the test rigs for an Mi-26, Mi-38 and Ka-62 in the AVIATEST Research and Testing Centre.

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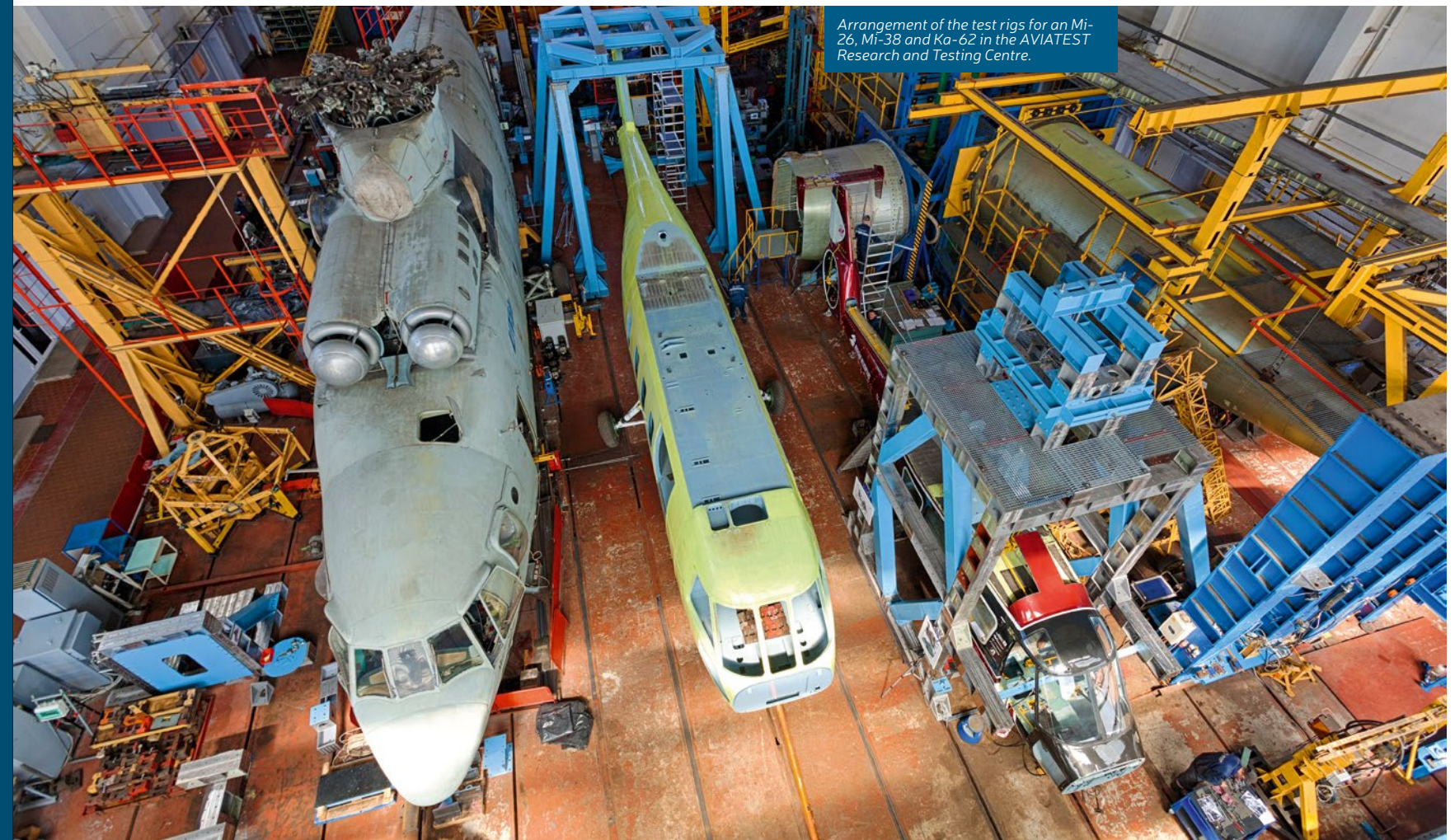


Fuselage of a Ka-62 helicopter is placed on a test rig for static trials of ground loading.

Design of the Ka-62 helicopter.



Test rig for fatigue tests of the full-scale fuselage and tail boom of an Mi-26T helicopter.

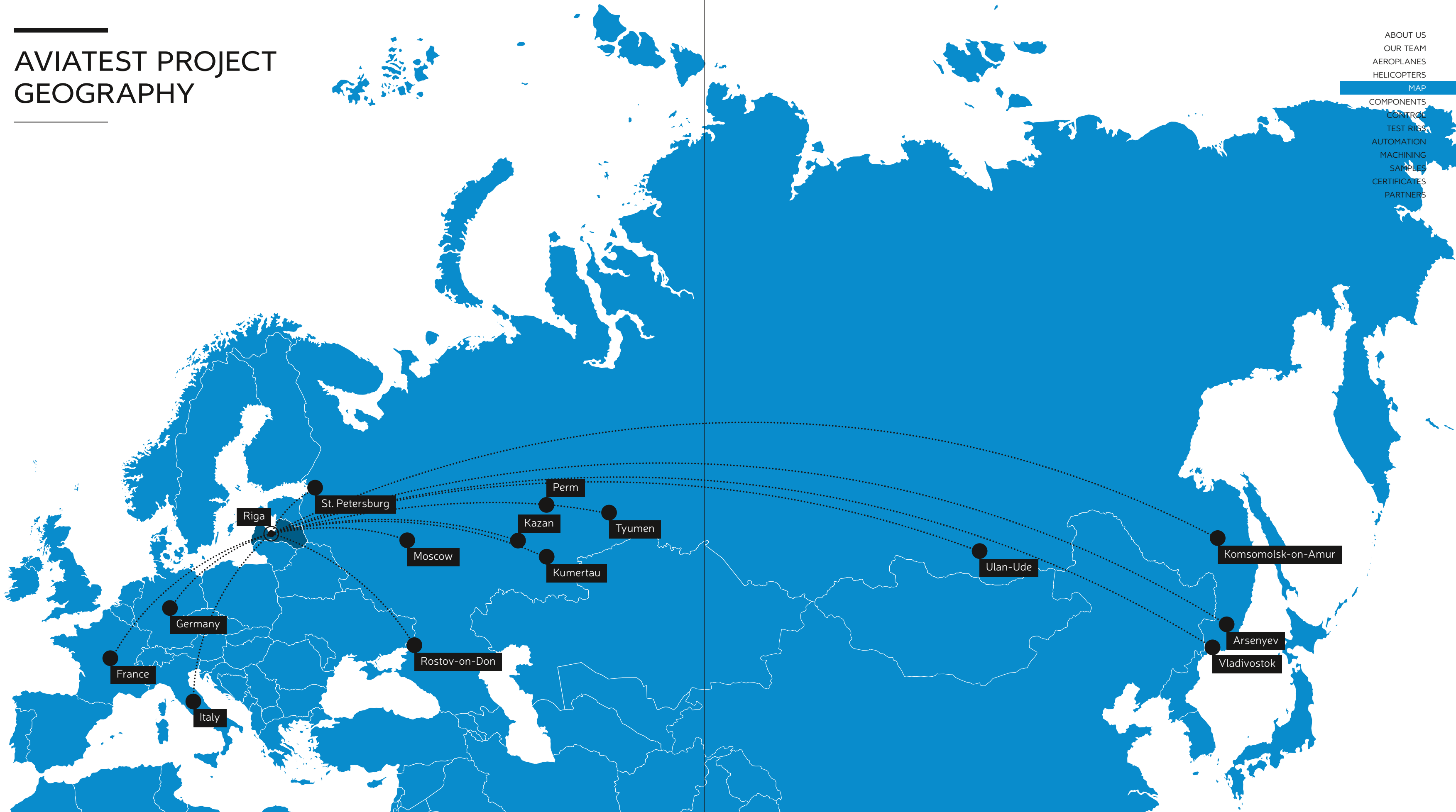


Arrangement of the test rigs for an Mi-26, Mi-38 and Ka-62 in the AVIATEST Research and Testing Centre.

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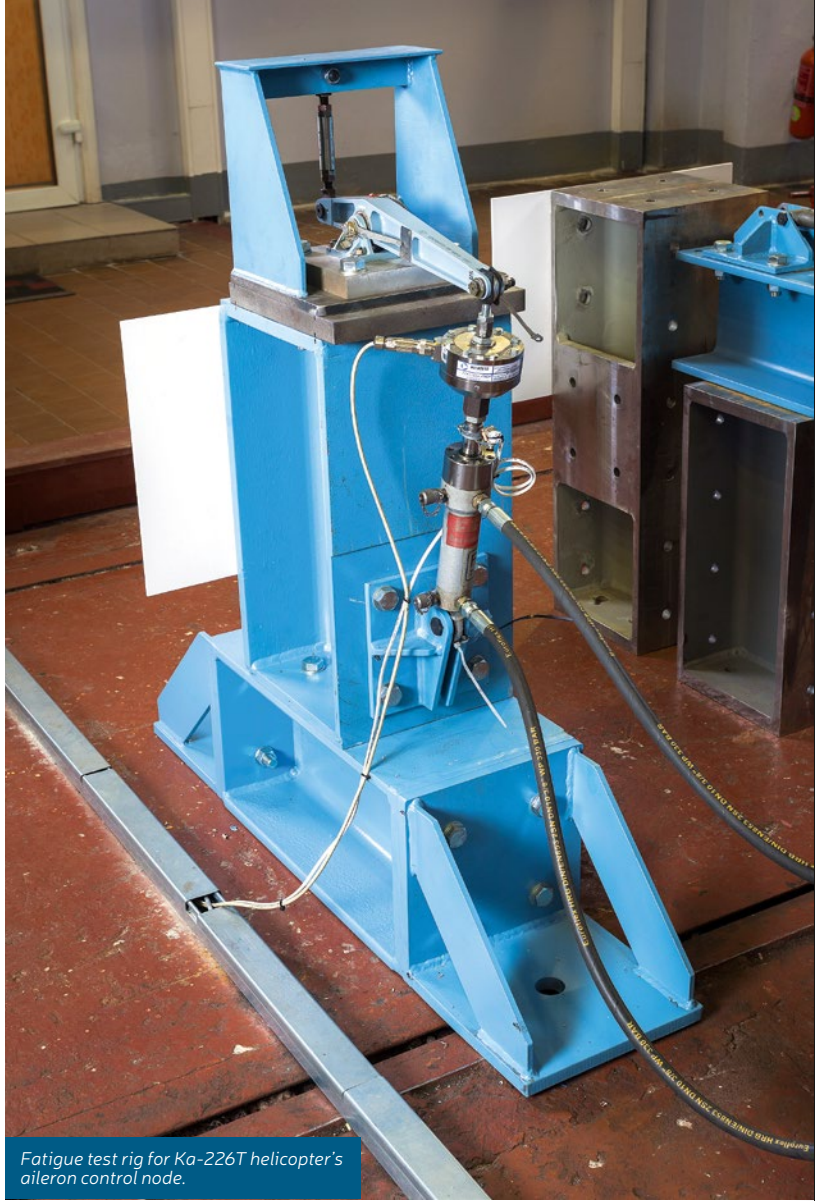
AVIATEST PROJECT GEOGRAPHY

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Test rig for wall niches of nose landing gear as part of the front compartment of the SSJ-100 aircraft's fuselage.



Fatigue test rig for Ka-226T helicopter's aileron control node.



Fatigue test rig for Ka-62 helicopter's antitorque rotor body frame.



Fatigue test rig for Ka-62 helicopter's tail fin.

COMPONENT TESTING

AVIATEST Research and Testing Centre conducts a whole spectrum of trials that provide a life span and certification of aircraft equipment. This includes trials of elementary samples of individual units, airframes of aeroplanes and helicopters.

For aggregate trials, AVIATEST offers a package of services that includes: design and construction of test rigs (mechanical construction of the control and measurement system) and trials that correspond to the Customer's technical assignment.

Aggregate trials are accompanied with all the necessary measurements, sensor monitoring of the trial object and analysis of behaviour and reasons for fracture.

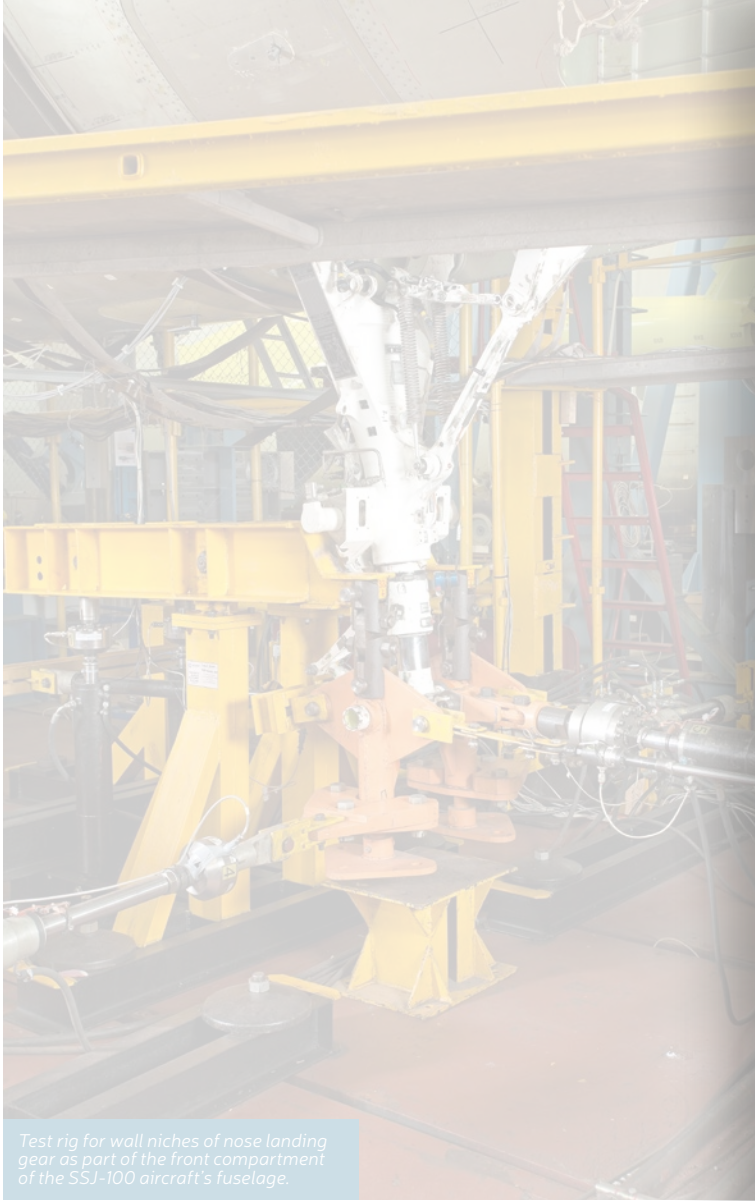


Eddy-current testing performed on one of the rear pressure bulkhead seals of the aircraft.

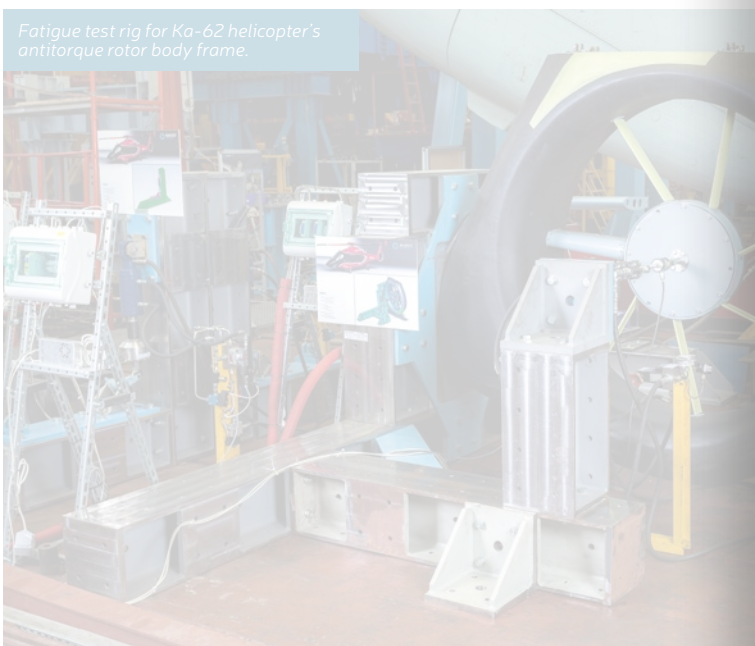


Non-destructive testing of the mock up engine's welding joint.

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Test rig for wall niches of nose landing gear as part of the front compartment of the SSJ-100 aircraft's fuselage.



Fatigue test rig for Ka-62 helicopter's antitorque rotor body frame.

NON-DESTRUCTIVE TESTING

AVIATEST Research and Testing Centre provides non-destructive testing that exposes the measurements, reliability and main working capabilities of the object or its separate components without the necessity for shutdown or disassembly. AVIATEST specialists use the whole spectrum of modern methods of non-destructive testing.

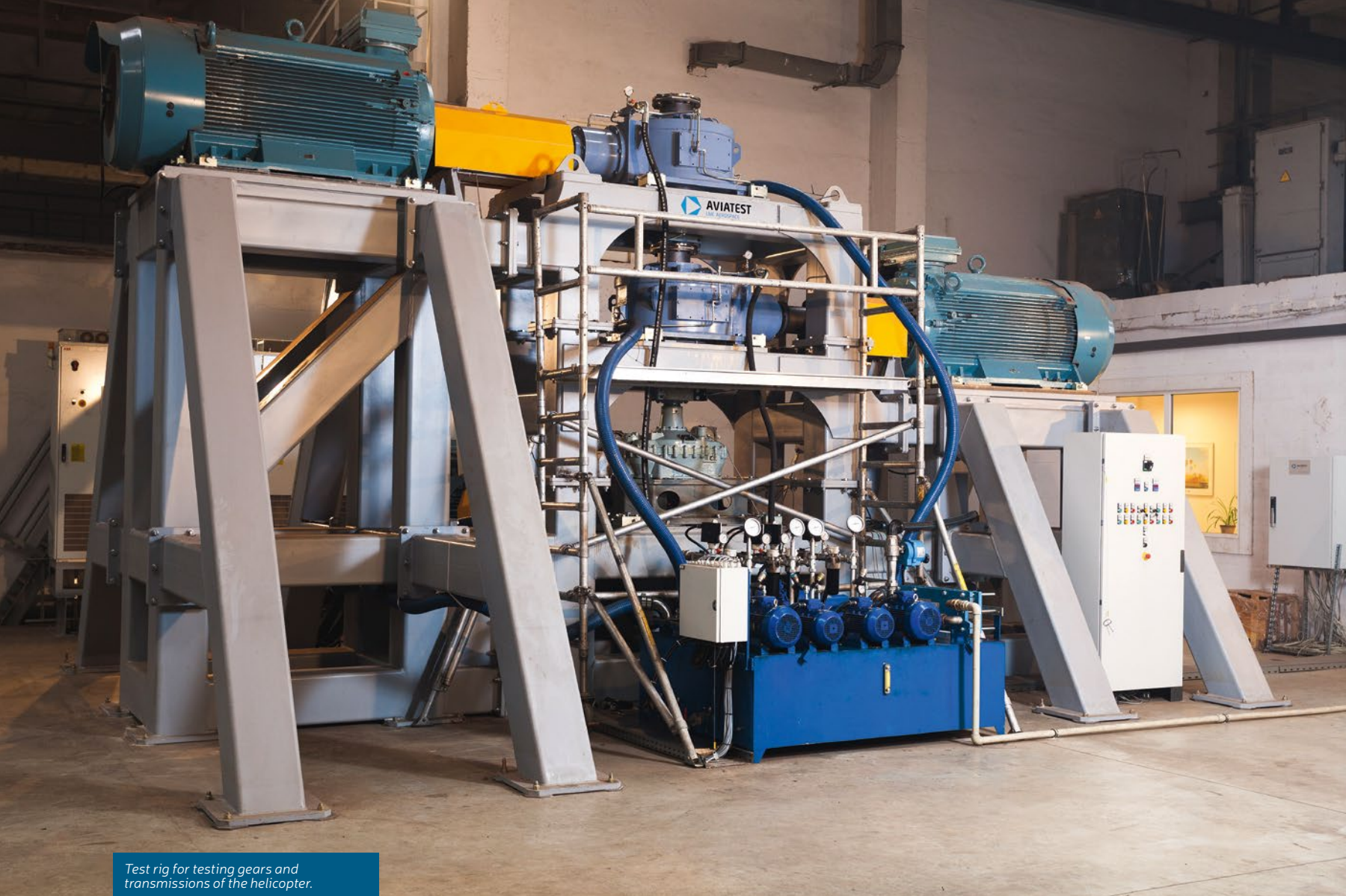
We use the full spectrum of modern methods of non-destructive testing including ultrasonic, capillary, magnetic powder, x-ray and other diagnostic methods to perform quality control of welds, identify geometric deflection, measure residual stress, determine increased stress condition spots and develop a structure monitoring procedure.



Eddy-current testing performed on one of the rear pressure bulkhead seals of the aircraft.



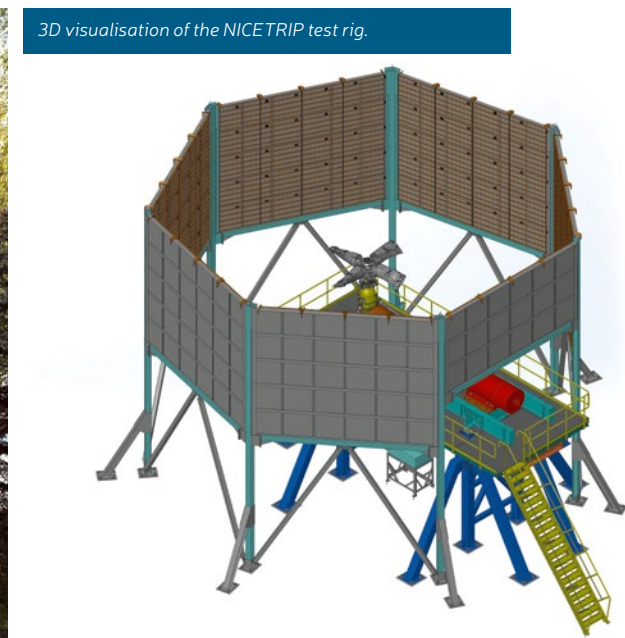
Non-destructive testing of the mock up engine's welding joint.



Test rig for testing gears and transmissions of the helicopter.



Preparation of the test rig for whirl tower testing of the PRGB and rotor within the NICETRIP project.



3D visualisation of the NICETRIP test rig.

MANUFACTURING OF TEST RIGS

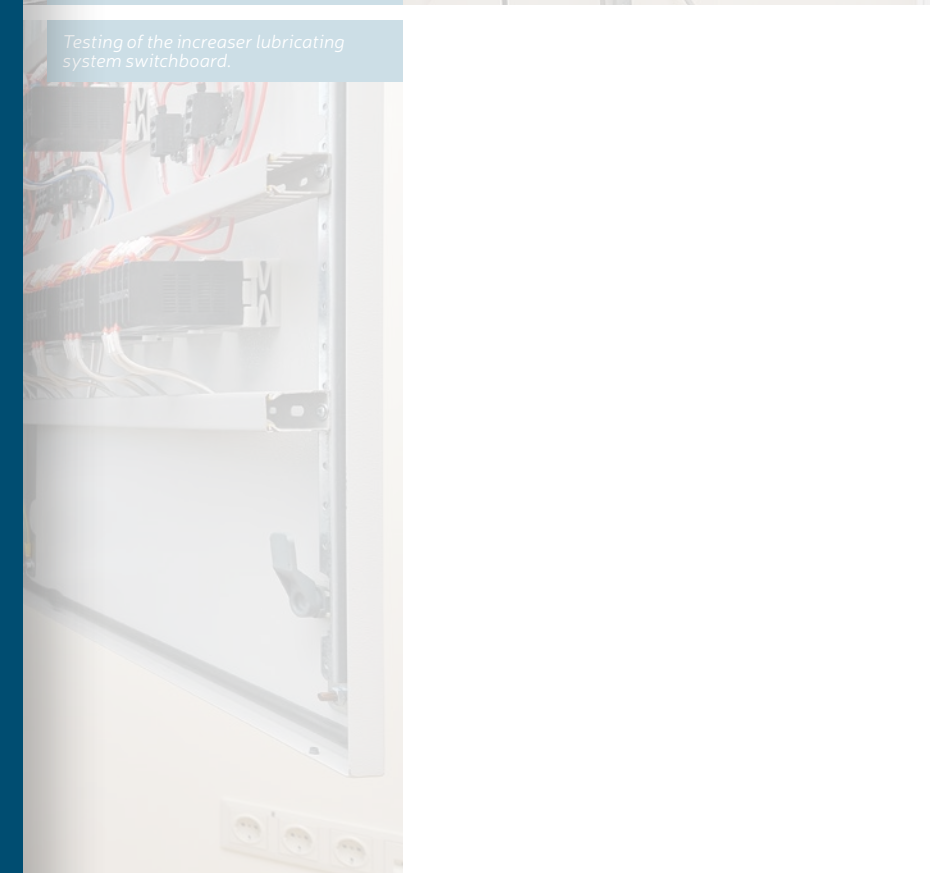
In cooperation with the TTS factory (an enterprise that is a part of the LNK Group company), AVIATEST Research and Testing Centre provides the design, manufacturing and entry into service of various test rigs.

Our specialists create structures for securing the testing object and electrical systems for the controlling and conducting of measurements.

After the completion of the whole work cycle, AVIATEST offers a ready-made solution, that is developed specifically for each individual case. Before the test rig enters into service, all the necessary tests are performed and our specialists carry out supervised installation and all subsequent warranty maintenance.



Preparation for the electric jack controlling system startup.



Testing of the increaser lubricating system switchboard.

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INDUSTRIAL AUTOMATION GROUP

AVIATEST Research and Testing Centre provides a set of works in different areas of manufacturing technological process automation: woodworking, transshipment of bulk cargo, assembly lines etc.

The automation of technological and manufacturing processes is performed to increase productivity, as well as to increase the level of workplace safety and reliability. The advantages of industrial automation are: significant increase in the overall efficiency and improvement of product quality.

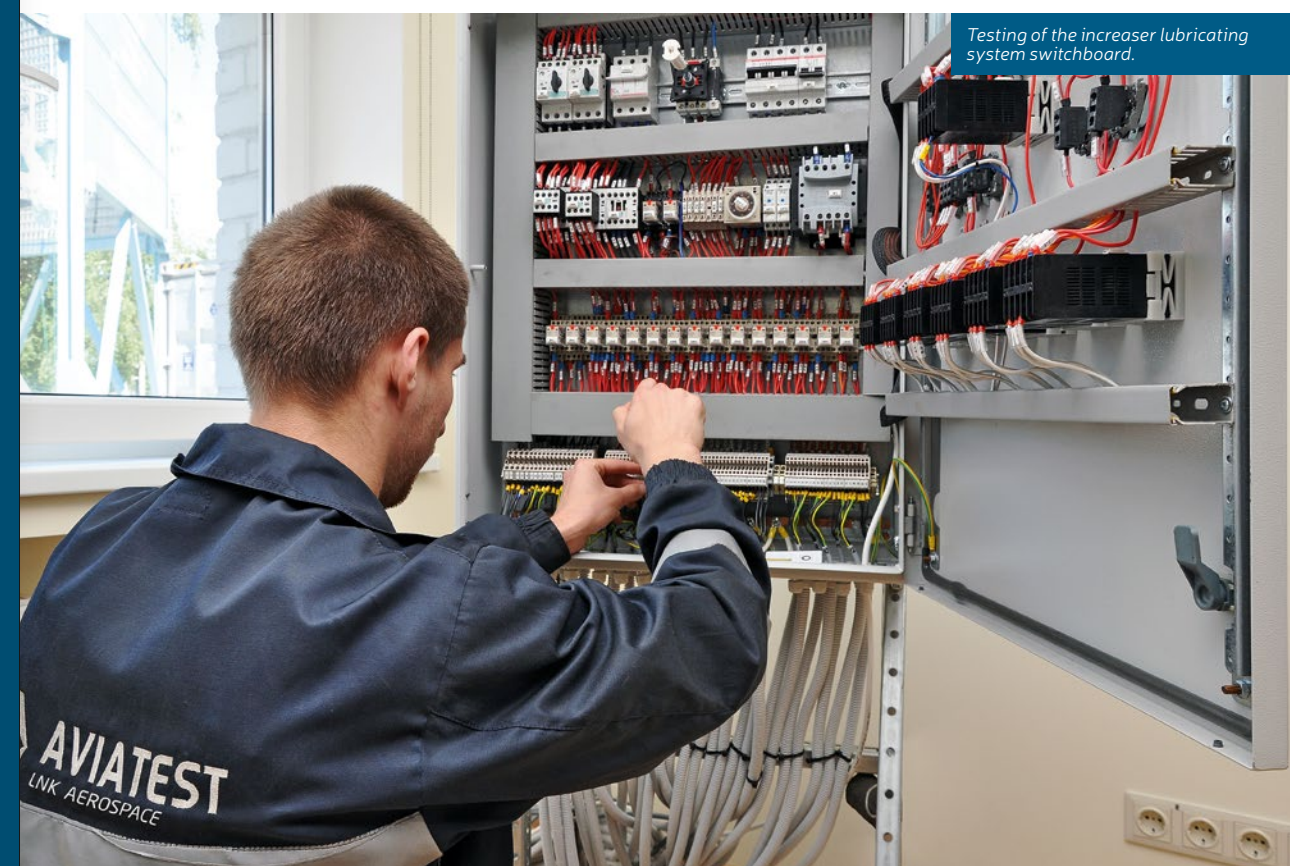
Technological process automation involves the installation and setting of coordinated work of the following elements: - computational and controlling devices (controllers) – signal receiving and conversion tools (transmitters) – information display and registration devices (operator's station, registrars); - execution units (electric drivers, pneumatic drives, hydraulic lines).

Test rig for testing gears and transmissions of the helicopter.

Preparation of the test rig for whirl tower testing of and the PRGB and rotor within the NICETRIP project.



Preparation for the electric jack controlling system startup.



Testing of the increaser lubricating system switchboard.

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HIGH-PRECISION MACHINING

AVIATEST provides a wide spectrum of mechanical and assembly components manufacturing services. Solved production problems: mechanical processing, heat processing, electroplating, welding, assembly, various types of controls, including non-destructive ones (magnetic powder, radiological), measuring of geometrical dimensions using a portal CMM and a microscope.



High-speed machining centre MIKRON HMS 600 U.



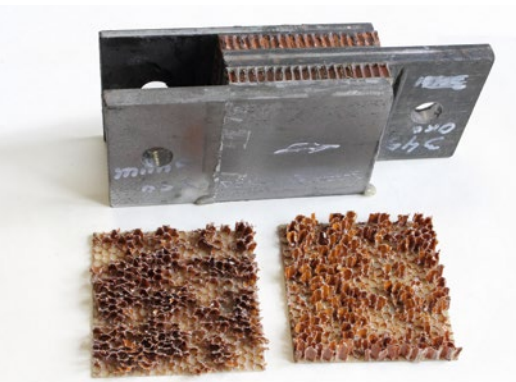
Robofil 240cc – electrospark wire-cutting 5-axes centre and Roboform 350 – electrospark piercing 4-axes centre.

CHARMILLES

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AVIATEST has all the required machining equipment, including a 3-5 axes milling centre, lathe and grinding machining centre, wire and die sinking erosion for the manufacturing complex and precise parts from almost any material. It is possible to manufacture component parts up to 2700 mm long. Our specialisation is – parts and assembly units for aircraft construction, tool construction, machine construction and forming tools.





Servohydraulic test systems
INSTRON 8802.

SAMPLE TESTING

AVIATEST Research and Testing Centre is equipped with modern test machines that allow our specialists to conduct a wide spectrum of fundamental sample testing. In order to achieve more objective results, samples are tested at a wide range of loads and temperatures.

In cooperation with Centre Composite enterprise, the AVIATEST tests layered composite materials to determine their stress-strain properties in the context of static and high-speed power load conditions with regard to the effects of temperature, humidity and time factors, and also performs the computational-and-analytical backup of industrial hub and composite material aggregate field testing.

AVIATEST testing machinery and mounts have all the necessary certificates.

Certificates were issued in correspondence with the standards of the laboratory accreditation of the United Kingdom Accreditation Service. They provide measurement uniformity of acknowledged national standards, and unite the measurements that are implemented in the National Physical Laboratory or any other acknowledged laboratory that corresponds with national standards.

The abovementioned mechanical device was tested under the following criteria and modes specified below, only with escalating power for ISO 7500-1 while using machinery inspection that is calibrated for ISO 376.

Enterprise specialists are certified according to the international standard EN ISO 9712:2012.

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CERTIFICATES

AVIATEST Research and Testing Centre is certified according to the Latvian National Accreditation Bureau (LATAK) and Interstate Aviation Committee (IAC).



Servohydraulic test systems
INSTRON 8802.



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PARTNERS

AVIATEST Research and Testing Centre regularly conducts product testing for leading European and Russian manufacturers. Currently our partners are:



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office@aviatest.lv

www.aviatest.lv

