

The V International Industrial Forum “The NDT Territory. Non-destructive Testing. Tests. Diagnostics” took place on 27 February – 1 March in Moscow at “Expocentre” central exhibition complex.

This year it was the first time that the Forum included a broader range of subject matters covering the following areas:

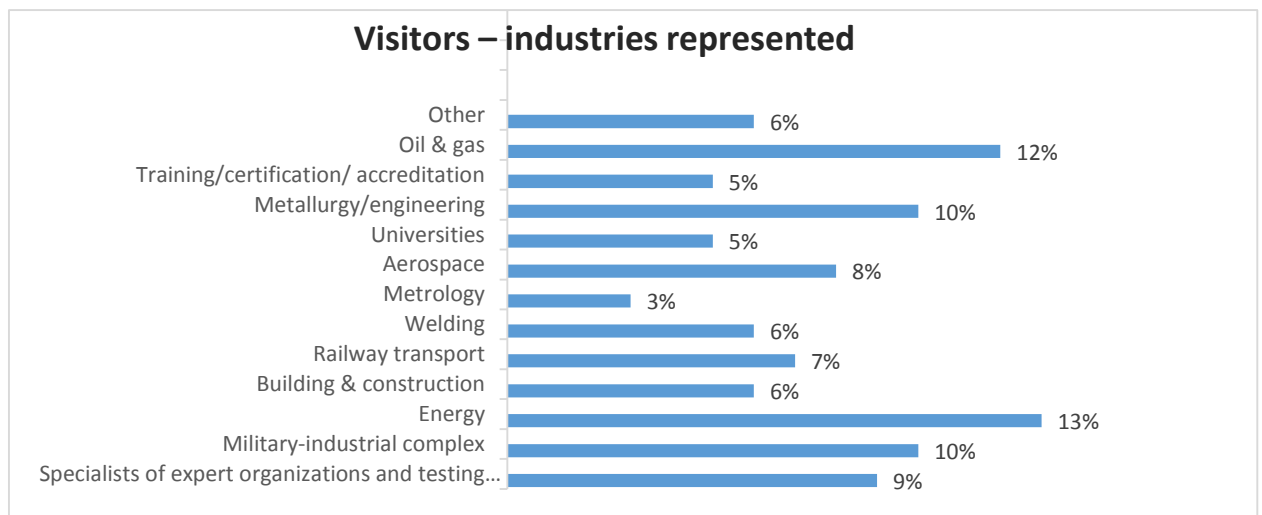
Non-destructive testing and defectoscopy
Physical and mechanical properties research
Technical condition diagnostics and monitoring
Accident risk evaluation and estimation
Forecasting of sites and facilities

It was evidenced by the number of participants and visitors, the diversity of the audience and represented fields of research that, taken as a whole, these issues are highly relevant.

RSNTTD President, D.Eng.Sc., Professor, Director of the Research Center of Technologies of Quality Control in Space Systems of ITMO University Vladimir Prokhorovich; RSNTTD Vice-president Sergey Klyuev; RAS Academician, Honorary President of RSNTTD, Institute of Engineering Science, RAS (Ural Branch), Eduard Gorkunov; Corresponding Member of RAS, RAS Research Institute of Machines Science, Nikolay Makhutov; General Director of NAKS Andrey Prilutsky; Deputy General Director of Industrial Safety Scientific Technical Center Nikolay Konovalov congratulated the participants on the opening of the Forum.

RSNTTD President Vladimir Prokhorovich noted that for 5 years of its existence the “NDT Territory” Forum has once again proven its status of the biggest event in the sphere of non-destructive testing and technical diagnostics, having unified in one event a three-day exhibition of equipment and technologies for non-destructive testing and technical diagnostics, demonstration of equipment by exhibitors, as well as specialized round table discussions.

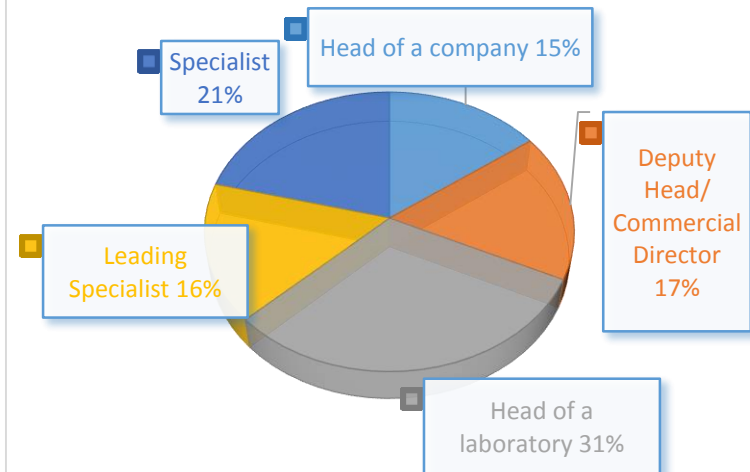
[Exhibitors of 2018 Forum](#) were 81 companies, 65% of which have been regular participants in “NDT Territory” since 2014. Among them are developers, suppliers of equipment for non-destructive testing and diagnostics, service providers, training and certification centers, professional editions, national



associations.

Experts of the field had an opportunity to exchange first-hand experience in the sphere of practical application of means and technologies of non-destructive testing and technical diagnostics in aerospace, military and engineering, oil & gas and energy sectors of our country, as well as railway transport, metallurgy, building & construction and modern welding industry.

VISITOR PROFILE: POSITION



More than 3500 **visitors** attended the Forum, among them are heads of companies and laboratories, leading specialists, engineers from various sectors responsible for selection and implementation of non-destructive testing and diagnostics technologies in organizations.

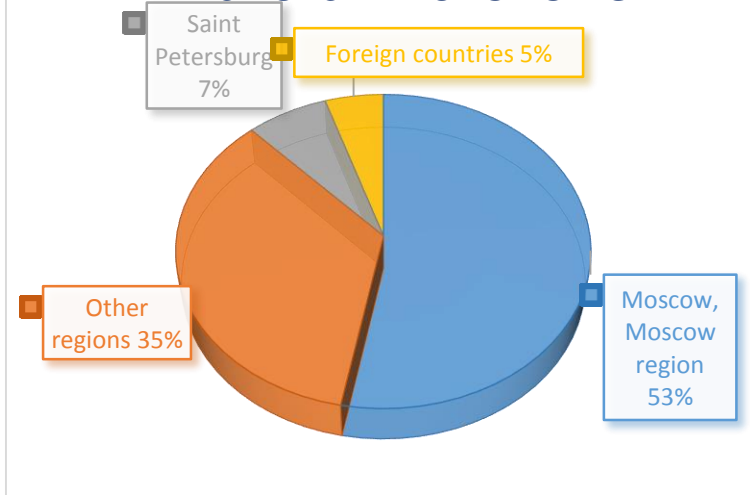
53% of the visitors were specialists from Moscow and Moscow region.

42% were representatives of other regions: Privolzhsky federal district (Nizhny Novgorod, Kazan, Naberezhnye Chelny, Samara, Perm,

Ufa), Far Eastern District (Vladivostok, Khabarovsk), Central Federal District (Voronezh, Kaluga, Lipetsk, Ryazan, Tula, Yaroslavl), Northwestern Federal District (Kaliningrad, Murmansk, Severodvinsk, Petrozavodsk, Saint Petersburg), Ural Federal District (Ekaterinburg, Surgut, Angarsk, Magnitogorsk, Tyumen), Siberian Federal District (Tomsk, Krasnoyarsk, Novosibirsk, Barnaul, Omsk).

5% of the visitors were specialists from Belarus, China, Czech Republic, Ukraine, Latvia, Kazakhstan, Azerbaijan, Germany.

VISITORS' PLACE OF ORIGIN



The broad subject matter of the Forum allowed each exhibitor to extend the

contact list of potential clients and partners, familiarize themselves with new equipment, evaluate own competitive performance and demand on own products, identify market trends. Exhibitors enthusiastically exchanged experience in the sphere of practical application and development of means and technologies of non-destructive testing and technical diagnostics in aerospace, military and engineering, oil & gas and energy sectors of our country, as well as railway transport, metallurgy, building & construction and modern welding industry.

Instruments and equipment for various methods of non-destructive testing and technical diagnostics were exhibited. Many participants brought new developments and technologies to the Forum. For instance, the research and production enterprise "NPK Luch" annually presents at the "NDT Territory" exhibition latest samples of ultrasonic equipment. This year the company demonstrated a multichannel ultrasonic flaw detector ПЕЛЕНГТМ -415, ultrasonic flaw detector УД2-70, ultrasonic thickness gauge УТ-111, ultrasonic thickness gauge ТУ3-2, ultrasonic tester МХ01-У3Т-1 aimed at measuring key parameters of ultrasonic flaw detectors upon adjustment, repair and calibration testing in accordance with GOST 23667 "Non-destructive testing. Ultrasonic flaw detectors. Methods of measuring the main parameters".

Olympus company is a world leader in production of equipment for non-destructive testing. This year, the company exhibited at its stand a flaw detector for composite materials BondMaster 600 having three operating modes (impedance, resonance, ultrasonic testing); the newest measuring video endoscope IPLEX NX, measuring video endoscope IPLEX RX (in the State Register of Measuring

Instruments of Russia), IPLEX UltraLite, ultra-thin video endoscope IPLEX TX; thickness gauge MagnaMike 600; express chemical analyzer of metals and alloys Vanta; scanners and transformers.



Locus company demonstrated innovative equipment basing on thermography for various purposes, a thermographic device NDTherm which is produced by Opgal. NDTherm allows detecting defects in various materials and forms, such as CFRP, GFRP, sandwich structures, hybrids, porous materials and metal parts. The stand also demonstrated a mobile and ergonomic ultrasound camera DOLPHICAM EXPERT designed for non-destructive testing of CFRP and GFRP of up to 16 mm thickness with the possibility to create 2D and 3D images of suspected damage areas.

Proceq Rus company presented innovative technologies among which is an ultrasound device for concrete control Pundit Array Live. This scanner is wirelessly connected with an iOS app to an Apple® iPad. It comes with Artificial Intelligence (AI) user support and 3D imaging. Benefits of this device are real-time tomography, Smart A.I. user support and positioning, increased productivity. Among the latest developments presented at the stand was the original Schmidt hammer which has become essential for every standard hardness testing worldwide. It includes versions NR and LR for recording impact values recorded on registration paper.

Acoustic Control Systems company presented an Ultrasonic thickness gauge A1207 which is the smallest thickness gauge combining usability and convenience with all functional capabilities of a modern thickness gauge. The advantages of this device are a single crystal transducer with a wearproof ceramic protective cover and small diameter of the working surface which allows testing of corroded surfaces with the minimum radius of curvature from 10 mm.

Ultrasonic thickness gauge “Bulat 3” was presented at the stand of Constanta company. The thickness gauge ensuring high accuracy of results in laboratory, shop and field conditions, measures wall thickness of metal and non-metallic materials for special and general purposes (including under protective covers of thickness from 2 mm) within the thickness range of 0.25 to 300 mm with the use of single and dual element transducers.

The [business program](#) of the Forum covered a set of methods of defining the technical condition of objects, as well as issues of application of risk-oriented approach upon estimation of the possibility and operation of dangerous industrial facilities, facilities and infrastructure of railway transport, atom energy, building and construction, and military-industrial complex.

Leading developers, representatives of largest corporations and companies, field-oriented institutions and departments participated in round table discussions. Among them are ITMO University, NRC «Kurchatov Institute», Rostechnadzor, Constanta LLC, SRO NP “NAKS”, IMASH RAN, AKS Ltd, PJSC Gazprom, PJSC Rosneft, JSCo "RZD", RSC Energia, Khrunichev State Research and Production Space Center, FGUP VNII VIAM, JSC SDB Turbina, Echo+ Ltd, Tupolev PJSC, JSCo «PO «Sevmash», PJSC Magnitogorsk Iron & Steel Works, PJSC NLMK, NPO Gorizont LLC, JSC «Baltic Shipyard», PJSC LUKOIL, JSC «Kompozit», State Space Corporation ROSCOSMOS, Research Institute Tomsk Polytechnic University, "Etalon" Scientific and Technical Center, JSC "NIKIET", WELD LLC, CRISM "Prometey", RII of Bridges, Pipeline Transport Institute LLC, Russian Space Systems JSC and many other companies.

The business program of the “NDT Territory 2018” Forum included [12 round-table discussions](#).

The round-table meeting on “Non-destructive testing and technical diagnostics of the condition of ground-based space infrastructure objects of space launch sites of Russia, as well as objects of large-scale energy industry and national economy” included discussion of development prospects and new possibilities of methods and means of non-destructive testing of construction structures, problematic issues of engineering design, implementation and exploitation of monitoring systems of the technical condition of unique objects. The round-table meeting covered the following issues: ensuring safe and economical operation of construction structures of buildings on all stages of the life cycle; development and new possibilities of the methods and means of non-destructive testing of construction structures.

The advantage of the round-table program “Technical diagnostics of railway transport objects” including four main reports and discussions was the fact that the discussed topics covered problems and advances in the sphere of non-destructive testing and diagnostics of various objects, i.e. artificial constructions, rails and locomotives. The speakers offered to initiate work on creation and implementation of intellectual systems on condition evaluation of artificial constructions of railway transport; there were defined areas of focus for shift from rail defectoscopy to diagnostics of technical condition of rails which is quite relevant for improvement of the currently existing non-destructive testing system. The round table was successfully held with active and lively discussions after each report initiated by the accurately delivered extensive material, as well as conclusions made by the speakers on the ways of improvement of the analyzed systems of non-destructive testing and technical diagnostics.

The round-table “Technical diagnostics at hazardous industrial facilities” was dedicated to the use of risk-oriented approaches upon evaluation of accident risk. In this task the information acquired in the result of implementation of non-destructive testing and technical diagnostics of objects should be of a quantitative character, then quantitative accident risk assessment becomes available. These possibilities were presented in the reports at the round-table discussion.

Moderators of the round table “Technical diagnostics in nuclear power engineering” noted that the methods of non-destructive testing and technical diagnostics are aimed at ensuring reliability of equipment, pipelines and nuclear power plant equipment, more specifically at ensuring strength reliability. However, experience shows that non-destructive testing and technical diagnostics effectiveness significantly increases if they are applied in combination with strength analysis of the inspected object, or rather the analysis of strength reliability.

The visitors showed great interest in the round-table discussion “Non-destructive testing in the space industry and the military-industrial complex”. More than 60 specialists participated in the work of the round table. Among the issues discussed in the reports of the round table are development perspectives of priority branches of the military-industrial complex and problematic issues of non-destructive testing upon development and implementation of new materials and technologies into production of modern rocket and space equipment in the space industry.

The following issues were discussed during the round table meeting: non-destructive testing of constructions and products created with new technologies (friction-stir welding, additive technologies); non-destructive testing of the quality of products and constructions of composite materials: current state and perspectives; development and new possibilities of methods and means of non-destructive testing of mechanical properties of materials; current issues of control of material hardness, functional coverings and thin films.

You will find the extended information on the outcomes of the Forum, reports on round-table discussions and conference video materials on the [website](http://www.expo.ronktd.ru) www.expo.ronktd.ru

The closing of the XIV All-Russian contest of specialists in the field of non-destructive testing was traditionally held on March, 1 organized by the Industrial Safety Scientific Technical Center and the Quality Research and Training Center together with "NIKIMT-Atomstroy" under the authority of the Russian Society for Non-Destructive Testing and Technical Diagnostics. The contest was held on 7 methods of non-destructive testing: acoustic emission, vibration diagnostics, visual and measurement, penetrant (capillary), magnetic, radiation and ultrasonic. All contestants confirmed their high degree of professional qualification. The winners were awarded with diplomas and valuable prizes.

RSNTTD management thanks all exhibitors, visitors, moderators of round tables for participation in "NDT Territory 2018" Forum. **We look forward to welcoming you at "NDT Territory 2019" Forum on 04 - 06 March!**

