

Forum NDT Territory - 2017

Exhibition of NDT Equipment and Technologies

Industrial Round Table Discussions

February, 28 – March, 2, 2017

Moscow, CEC Expocentre

IV International Industrial Forum NDT Territory 2017 of equipment, technologies and services of non-destructive testing and technical diagnostics was held from February, 28 to March, 2 in Moscow, CEC Expocentre.

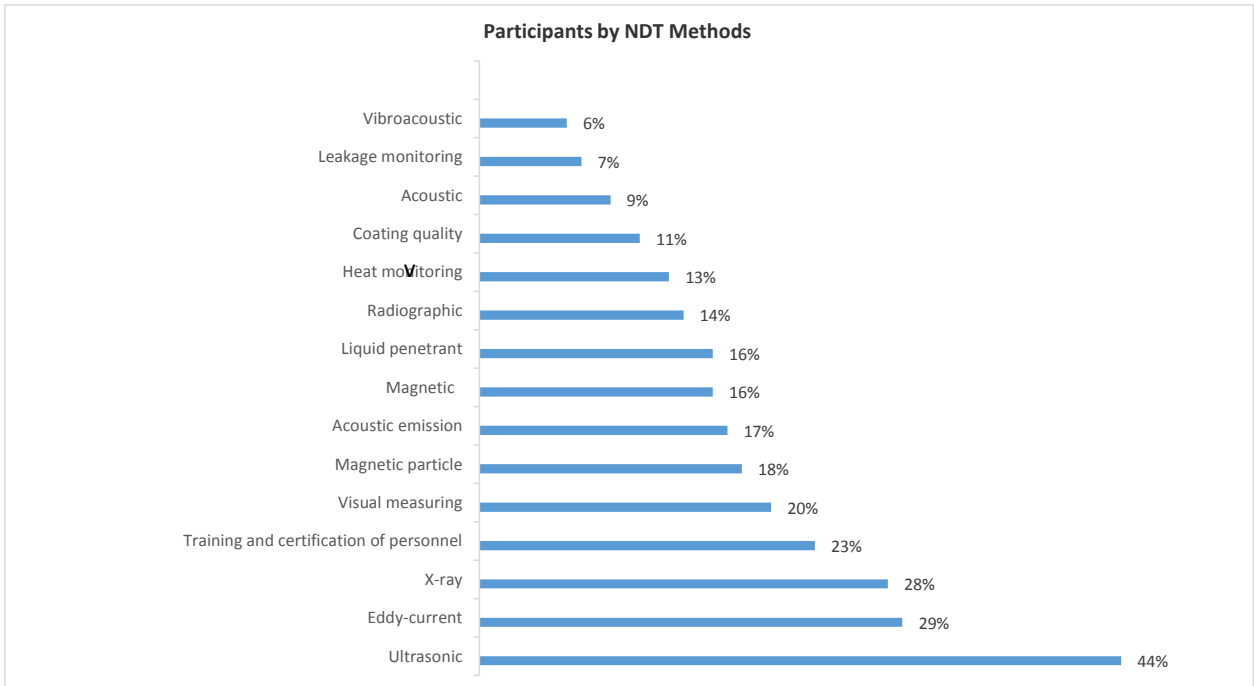
During 4 years the Forum "NDT Territory" was grown into a large-scale event including the exposition, extensive business program discussing current issues, looking for new ways of technology development and solving complex tasks of non-destructive control and technical diagnostics.

RSNTTD President, Academician RAS, Eduard Gorkunov; RSNTTD Vice-President Sergey Klyuev; Chief Research Scientist of Bakulev Scientific Center for Cardiovascular Surgery, Russian Academy of Medical Sciences, Associate Member of RAS Simon Matskeplishvili; Director of Central Aerohydrodynamic Institute, Member of RAS Sergey Chernyshev; Head of the Scientific School of Mechanical Engineering Research Institute (IMASH) of RAS, Associate Member of RAS Nikolay Makhutov greeted the participants at the opening ceremony.

The speakers emphasized that the Forum gives an opportunity for representatives of different industries to have face-to-face contacts with NDT manufacturers for productive cooperation and acute problems solutions. All the guests mentioned the importance to hold the Forum for expansion of interests and capabilities of the entire NDT and technical diagnostics professional community.

77 exhibitors: developers, suppliers of non-destructive testing and diagnostic equipment, service companies, training and certification centers, specialized editions, national societies presented equipment and services. 10 round table discussions were held within the framework of the business program. More than 3000 visitors, companies' executives, laboratories heads, leading specialists attended the Forum.

Exhibitors presented devices of various methods of non-destructive testing. Ultrasonic (44%), eddy current (29%) and x-ray (28%) testing equipment were the majority. Visitors noted the rise of certification, attestation and training centers (23%) participants in 2017.



Many participants presented innovations and new technologies.

Acoustic control systems, Ltd. demonstrated the modernized EMA thickness gauge A1270 with the innovative technology of pulsed biasing, which essential advantage is absence of permanent magnet in the EMAT. That helps to avoid strong attraction of transducer to the surface of objects made of ferromagnetic steels, to scan the object of testing through an air gap and also excludes sticking of metal chips to the protector of the transducer, thereby increasing its service life.

Argus Pipeline offered solutions for various types of non-destructive testing: AUZK ARGOVISION system, phased array ultrasonic fault detectors ISONIC 2009, ISONIC 2010 and a new model of the fault detector ISONIC 3510.

SynteZ NDT, Ltd. launched a new model of "RPD-250 IS" series device with either front or side radiation output, with a hermetic (IP 65) program control unit and internal heating of the boards. Unlike the analogues produced in Russia, this monoblock has a single functional and design concept with a unipolar X-ray tube. A removable air fan with battery power is provided for forced cooling.

INTERUNIS-IT presented a number of own developments in the field of NDT acoustic emission. Demonstration of the possibilities of intellectual non-threshold method of recording acoustic emission against the background of stationary high-amplitude noise was organized at the stand. The new registration technology, named SMART, implemented in the multifunctional portable device "UNISCOPE", will significantly expand the possibilities of using acoustic emission diagnostics for monitoring hazardous production facilities in the standard operating mode, that is without decommissioning. Moreover, a new generation of acoustic emission systems with a digital data serial transmission - A-LineDDM-2 were introduced to visitors.

NTD equipment, including sets for visual inspection, welder's gauges, roughness comparison specimens, leak detectors with vacuum frames, radiography consumables demonstrated the manufacturer STC Expert company.

Every year Pergam-Engineering company demonstrates the newest examples of diagnostic equipment at the Forum NDT Territory. This year Pergam-Engineering presented the eddy current fault detector with matrix converter support (EddyfiReddy), the eddy current fault detector for monitoring tubes of heat-exchangers (EddyfiEctane), the autonomous scanning system for mapping the corrosion of walls, vessels and tanks (Silverwing RMS2), the system for monitoring the state of pipeline wrapping and evaluation of the effectiveness of cathodic protection systems (PCMx), the innovative third generation system for searching water leakage (Eureka3), the high resolution thermal imaging camera for Research and Technical Development (FLIR X6530sc) and the thermal imager for leak detection of sulfur hexafluoride gas (SF6) and ammonia – (FLIR GF306).

Proseq Rus LLC offered a portable wireless hardness meter of the new generation Equotip® Live. The innovative wireless hardness meter EquotipLiveLeeb D and Equotip application with an intuitive user interface are easy for measuring and data collecting at any hardness scale.

Rentest company presented their own equipment: super-bright LED X-ray viewers of XRS series for decoding X-ray images; consumables for liquid penetrant testing "Elistist"; ultraviolet LED lamp "Elistist UFS 500/4" for working with luminous compositions under stationary conditions; equipment for magnetic particle inspection «Kriope RUS».

Synthesis Co. Ltd. is a constant participant of NDT Territory Forum. And every time various new X-ray developments are presented at their stand. In 2017 the company introduced a patented chain device for fastening monoblocks of X-ray machines at arbitrary-shaped tested objects, a stationary X-ray machine "0.6 SBK 200" in a monoblock version with forced air cooling and a monoblock device "0.2 SBK 200" with a focal spot with dimensions 0.5 × 0.6 mm, designed specifically for using in digital radiography, X-ray television and industrial computer tomography.

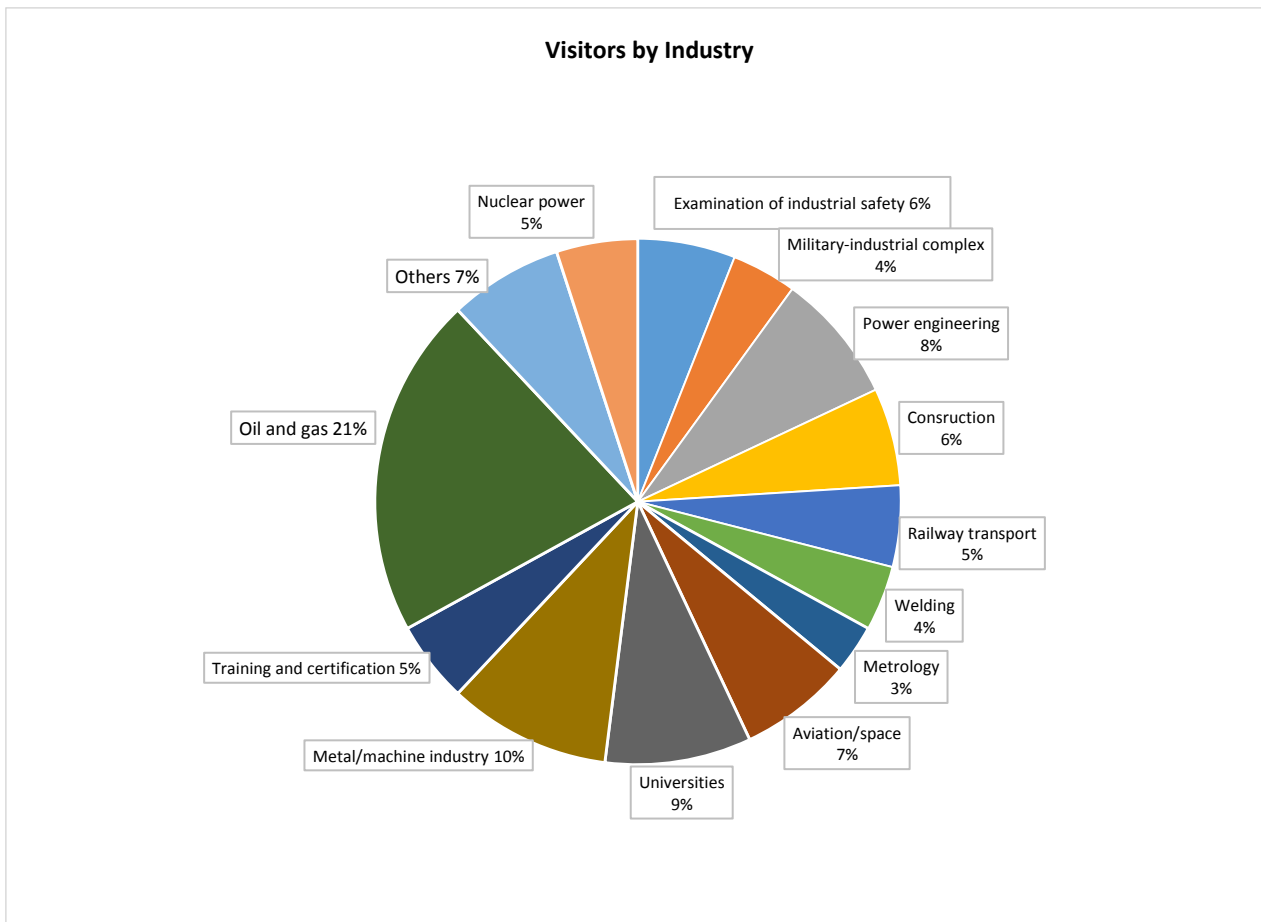
EXPERT NK LLC presented new equipment: the magnetic particle fault detector EMDEUS; the X-ray viewer NS-10V; installation of leakage monitoring, vacuum containers for various types of controlled units; multipurpose templates: USHK; USHS-2, USHS-3.

Energodiagnostika Co. Ltd. offered new modifications of stress concentration meters and scanning devices working on the base of magnetic memory of metal. The practical capabilities of the devices were demonstrated on samples. This year a special attention was paid to the magnetic eddy-current four-channel unit MVK-IKN based on the IKN-8M-4 device combining functions of magnetic (the method of magnetic memory of metal) and eddy current control of items.

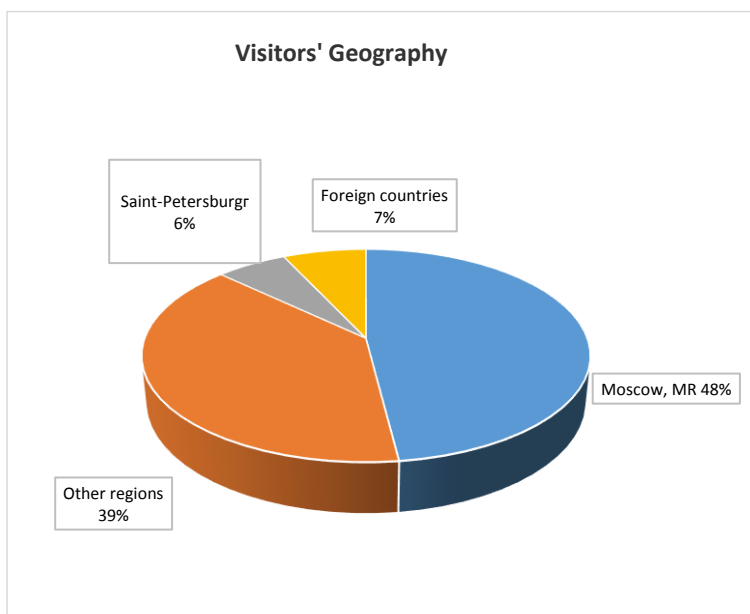
UNITEST Group of companies demonstrated the magnetic particle inspection unit UNIAMAG-1000 AC/DC with accessories for magnetic particle inspection, from the category of multi-functional stationary fault detectors and the portable inspection device for drill pipes "MAGPORTABUR", having no analogues in the Russian Federation and the CIS. This is the newest highly-efficient portable NDT system based on magnetic methods and intended for drill pipes defectoscopy. Pipe body defectoscopy is based on magnetic flux and scattering measuring methods (MFS) of defects.

ECB Gradient for the first time participated at the Forum, presenting engineering consulting services to visitors.

In 2017 NDT Territory Forum convoked visitors of various industries. The exhibition and business program was attended by specialists of the military-industrial complex, oil & gas, nuclear, engineering and railway industries, metrologists.



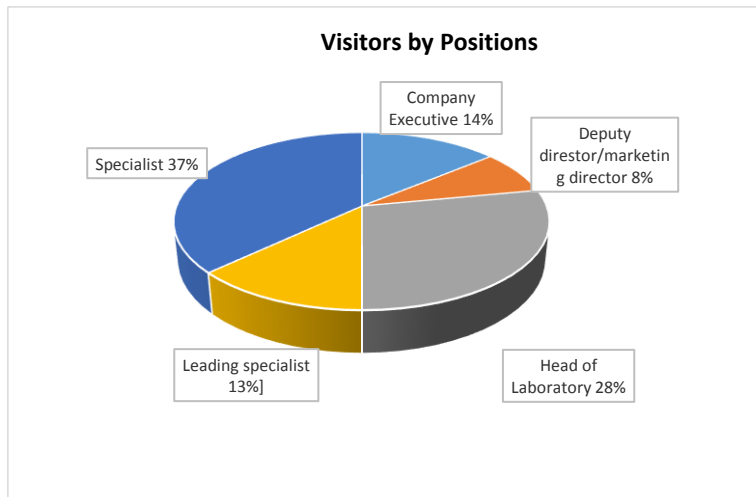
It is important to note that every year the percentage of regional specialists visiting the Forum rises. So, in 2017 comparing to 2016 their number increased by 9%.



Just like in 2016 the most active region, except the Central one, was the Volga Federal District (Samara, Izhevsk, Kirov, Orenburg, Perm, Ulyanovsk, Saratov, Ufa, Cheboksary, Nizhny Novgorod). Representatives of the Far Eastern Federal District (Khabarovsk, Vladivostok), North-Western Federal District (Ukhta, Severodvinsk, Vologda, Nizhnekamsk), Siberian Federal District (Tomsk, Omsk, Krasnoyarsk, Novosibirsk, Irkutsk), Ural Federal District (Noyabrsk, Chelyabinsk, Ekaterinburg, Surgut, Megion) also attended the Forum. For the first time representatives of

the Southern Federal District (Nevinnomyssk, Krasnodar, Stavropol, Volgograd) and North-Caucasian Federal District (Makhachkala) came to take part at the Forum.

Besides, the number of foreign specialists increased by 4% compared to the previous year. Specialists from Belarus, Canada, Latvia, Kazakhstan, Ukraine, Iran, Israel, Azerbaijan, China, Holland, the United States, Great Britain and Germany visited the exposition of NDT Territory 2017.



The business program of NDT Territory 2017 consisted of 10 round table discussions. The results of the work of the previous Board of the Council for Non-destructive Testing in Civil Aviation of the Russian Federation were summed up at the meeting of the Council. And information of the EASA requirement for the mandatory application of the prEN4179-2014 Standard was announced.

Participants of the round table discussion "Training, attestation and Certification" listened to six reports focusing on the issues of training, attestation and certification of non-destructive testing specialists in different industries, power engineering and transport, including new methods of non-destructive testing, as well as new approaches of competence confirmation basing on the positive domestic and international experience. All the participants' questions were answered and all the topics were clarified by the discussions and speakers' explanations. Summarizing the results of the co-work, the participants considered to be necessary to improve the interrelation between personnel training and certification and introduction of new approaches to the specialists' competence confirming taking into account the positive domestic and international experience.

The purpose of the round table discussion "Non-Destructive Testing in the Space Industry and Military-Industrial Complex" was the exchange of scientific and practical knowledge between specialists of Russian and foreign manufacturers and scientific organizations of the following acute issues:

- Non-destructive testing of products and constructions made of composite materials (CM);
- Non-destructive testing of constructions and products created by additive technologies;
- Perspective NDT methods and means for space industry and military-industrial complex (MIC);

Many issues of NDT technologies development and implementation for manufacturing of advanced products in space industry and military-industrial complex of the Russian Federation were discussed. Comprehensive and informative discussions allowed to determine the range of unresolved problems and prospective guide lines. Speakers answered to many interesting questions and accepted constructive criticism, helping to clarify the further work concepts and NDT in-depth research.

When applying the existing methods of the risk of accident assessment in the vast majority of cases the technical condition of the considered object is not taken into account. Thus, the possibility and necessity of technical diagnostics (TD) is excluded from the risk of accident assessment. That significantly complicates the quantitative risk indicators. Therefore it was decided to conduct a round table meeting on the topic of "Risk-oriented technical diagnostics" during NDT Territory 2017 Forum, where the main questions of opportunities, problems and tasks

of implementation of NDT and technical diagnostics methods and techniques for the risk of an accident assessment were analyzed.

Conducting the Session of the chief welders of Moscow and Moscow region at the Forum is due to the fact of integration of welding and quality control in the process of production in different industries while using welding and other related technologies (thermal cutting, surfacing, thermal and plasma spraying, soldering, etc.). That is the reason the problems of non-destructive testing and technical diagnostics are the most important topics and tasks to solve in welding and procurement industries. The issues of advanced methods, technologies and NDT quality control equipment of welded joints were considered in the first part of the session. During the second part the speakers discussed training, retraining and advanced qualification training of welding engineering specialists, news of standardization and assessment of employees' qualification.

Moreover, within the framework of the Forum business program round table discussions of modern methods and approaches of diagnostics of electrical equipment to ensure reliable electricity supply to consumers, NDT in oil & gas industry, standardization and metrology were organized. The meeting of the Expert Council on Acoustic Emission Diagnostics holding for the first time and round table discussion of professional qualifications system in welding, testing and non-destructive testing draw the participants' attention.

The winners of the annual contest "The Best Stand" of NDT Territory 2017 Forum were announced at the gala dinner. The first prize based on the results of the exhibition visitors' voting was awarded to ASK-Roentgen company.

Traditionally XIV All-Russian contest of NDT experts, organized by Research and Development Center "Industrial Safety" and National Verification Center "Quality" in cooperation with "NIKIMT-Atomstroy" under the aegis of the Russian Society for Non-destructive Testing and Technical Diagnostics, was officially closed on March, 2. The competition covers 7 NDT methods: acoustic emission, vibrodiagnostics, visual and measuring, liquid penetrant, magnetic, radiation and ultrasound. All participants of the competition confirmed the high level of professional qualifications. The champions and prize-winners were awarded with diplomas and valuable prizes.

RSNTTD Direction thanks all exhibitors, visitors, moderators of round table discussions for their participation in NDT Territory 2017 Forum.

We invite You to

**V International Industrial Forum
“NDT Territory. Non-destructive Inspection. Testing. Diagnostics”,
February, 27 – March, 1, 2018,
Moscow, Expocentre.**