

About Russian Society for NDT and Technical Diagnostics (RSNTTD) Voluntary System of Personnel Certification in the Field of NDT and Diagnostics

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Abstract. The description of RSNTTD voluntary system of personnel certification in the field of NDT and diagnostics registered by the Federal Agency on Technical regulation and metrology is given. This System is registered in the unified registration book of voluntary certification systems. Also discussed are System managerial structure and functioning of some its elements.

Introduction

In September 2005 the Russian Society for NDT and technical Diagnostics (RSNTTD) obtained the Registration certificate issued by the Federal Agency on Technical regulation and metrology. This certificate verifies that “RSNTTD Voluntary system of personnel certification in the field of NDT and diagnostics” (further in the text “System”) is registered under #POCC RU.K251.04IOH01 in the unified registration book of voluntary certification systems. The System is developed by all-Russian non-commercial organization that is Russian NDT Society and headquarter of which is located on the territory of Moscow Scientific-Industrial Association “Spectrum”.

The current system is a modification of previously used one that incorporates latest requirements of new and modified international standards ISO 17024:2003; 9712:2005; EN 473:2000.

1. Changes in Voluntary Certification System

The system comprises: scope of activity, organizational structure, and list of normative documents regulating the procedure of Certification Bodies (CB) approval, procedure of their conformity assessment as well as procedure of persons certification and qualification exams for three qualification levels. In addition to the above mentioned the System incorporates certification schemes, certification procedure and correctness verification as well; all this is done with taking into account the requirements of Russian and International certification systems and agreement with correspondent State control Bodies.

The System covers the procedures of personnel certification in the field of NDT and technical diagnostics and aimed to obtain unprejudiced information about tested objects condition via qualification evaluation of personnel in fact providing products quality assessment with the help of NDT as well as this personnel compliance with set competence

levels. In comparison with previously used system the new one has extended scope of activities relevant to certification, areas of accreditation and industrial objects' types.

The organizational structure of new System passed through several important changes. The main change is transformation of Committee on accreditation and audit into the Body on conformity assessment of NDT personnel CBs and training centers. The Body status became higher within the new System and it is directly subordinated to the Central Body.

Any person can apply to gain voluntary certification of certain level to the CB that passed conformity assessment within the RSNTTD voluntary system of personal certification. Assessment of CBs is performed by correspondent RSNTTD Body in accordance with requirement of the standard EN ISO/IEC 17024:2003 "Conformity assessment – General requirements for bodies operating certification of persons".

In its turn any CB can apply to be evaluated in accordance with compliance criteria imposed on such organization by voluntary RSNTTD system.

The basic criterion of CB assessment is compliance of all its structural parts with requirements of Russian and International norms. While the Quality managements system of CB should be in compliance with requirements of group of standards ISO 9000.

The procedure of persons' certification used by CBs is based on relevant Russian standards, interstate standards, normative documents of supervising Agencies as well as on International, European standards and other documents (including those implemented in specific industrial branches) in which formulated are requirements imposed on person qualification level. In the process of certification specified is evaluation of applicant education, specific professional training and ability to perform and follow up specific requirements, professional experience. The evaluation is performed upon results of specific evaluation methods (tests, exams and training). Proposed certification procedure provides objective evaluation of person qualification in the field of NDT as well as to evaluate his/her professional knowledge and experience and ability to perform specific practical functions and tasks.

To provide objectiveness, creditability and to avoid mistakes in the process of NDT personnel competence evaluation as well as to achieve harmonization in the certification operated by various CBs were developed and improved procedures of documents acceptance and integral assessment of results.

With the goal to improve harmonization of personnel certification process – in 2005 the "Examination Questions Bank for certification of I, II and III level NDT specialists" were prepared. The questions cover all basic NDT methods and classified in chapters while supporting software provides random selection of questions from different chapters to be used during exams.

One more very important contribution was made by the RSNTTD specialists – publication of Handbooks that can be used by students, technicians and engineers for training and education. In 2004-2005 the RSNTTD and publishing house "Mashinostroenie" published handbook "Non-destructive testing" in eight (8) volumes. In these books presented basic information on all basic NDT methods; technical specification of Russian and foreign instruments and equipment; requirements imposed on technical knowledge of specialists working in the field of NDT. All books can be used in the process of NDT specialists training. The handbooks review the following NDT methods: visual and measuring (v. 1); tightness examination and eddy-current (v. 2); ultrasonic testing (v. 3); acoustic tensometry, magnetic particle and penetrant testing (v. 4); thermal and electrical testing (v. 5); magnetic, optical and radio wave testing (v. 6); acoustic emission and vibration analysis (v. 7); anti-terrorism and forensic methods and ecological diagnostics (v. 8). These handbooks are very popular with specialists and currently the second edition is planned for publication.

2. Voluntary System: structure and functioning

The system structure is presented in Fig. 1.

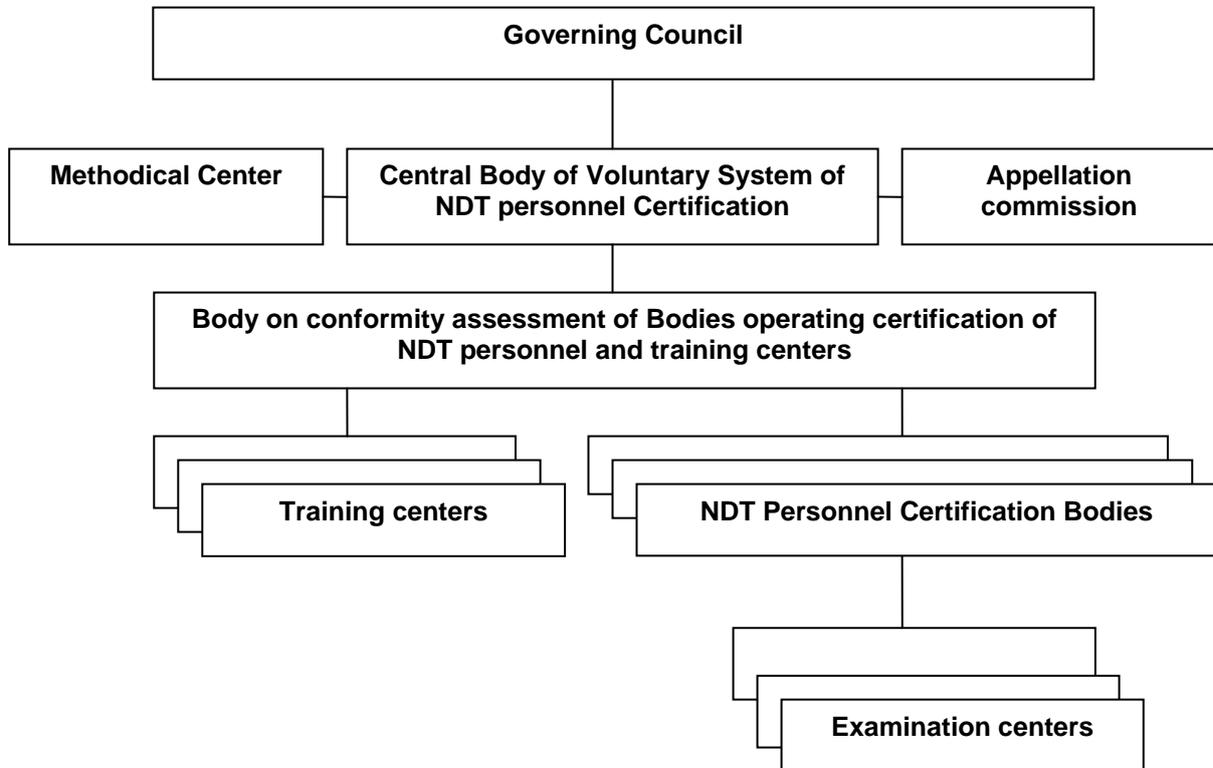


Fig. 1. Organizational Structure of the RSNTTD voluntary System of Certification of the personnel in the field of NDT and technical diagnostics

As it is clear from the structure the System comprises such elements as:

- ❖ Governing Body appointed by the RSNTTD
- ❖ Central Body of the system appointed by Governing Body
- ❖ Methodical Center
- ❖ Body on conformity assessment of NDT personnel Certification Bodies and training centers
- ❖ Appellation commission
- ❖ NDT personnel Certification Bodies and Examination centers
- ❖ Training Centers;
- ❖ Industrial enterprises and other organizations employing certificates holders;
- ❖ Persons working at industrial enterprises and in organizations providing NDT.

The elements of the System presented in Fig. 1 have following objectives and goals:

Governing Council appointed by the RSNTTD. Its functions are as follows:

- Approval of the System, its regulating and background documents.
- Working out the policy and strategy of System development.
- Promotion of the System to be recognized within the country and abroad.
- Evaluation of the System and its participants' efficiency.

Central Body appointed by the Governing Council. It performs the following functions:

- Supervision over established operating procedures of the System.

- Following up and guarantee of certification procedures and rules compliance to the Russian and International regulating documents and norms.
- Conducting the activity of the System and approval of Appellation commission decisions.
- Maintaining System register.
- Audits of approved Bodies operating certification of persons, training centers etc.

Methodical center appointed by the Central Body. It provides:

- Methodical and consultancy assistance to CBs and Training centers.
- Generalize experience gained during operation of approved CBs, international experience in the field of certification of persons.
- Develops new proposals on operation improvement based on gained experience and knowledge.
- Provides informational and methodical support to the System Central Body.
- Participates in the preparation and approval of examination questions and exams results evaluation procedures.

Body on conformity assessment of Bodies operating certification of NDT personnel and training centers is appointed by the Central Body. This Body provides:

- Conformity assessment of CBs in accordance with requirements of the System regulating documents, standard 17024 as well as with selected and implemented certification scheme. In fact these schemes can be based on one of the following documents: GOST 30489, Safety rules PB 03-440-02, EN473, ISO 9712 or EN 4179 or their combination.
- Issues certificates, reports and summaries with conclusions and decision about possibility to approve CB as accredited within the voluntary RSNTTD system.

3. Basis of System Functioning

The whole scope of the System activity is based on norms and documents stipulating the rules and procedures. Between these documents are:

- Governmental acts and industrial norms stipulating the requirements imposed on personnel providing NDT services and technical diagnostics;
- International, regional and national standards and documents regulating the certification of personnel;
- Norms, guidelines and methodical documents on NDT methods, syllabuses and examination questions banks;
- Set of documents regulating the System operation;
- Register of the System.

Still some documents should be developed and put in force.

4. Benefits of the new System

The newly introduced System provides active cooperation with industrial, regional, national and international certification schemes. The main goal is to get mutual total or partial recognition of certification results and implemented schemes to obtain better harmonization of certification process.

It improves experience exchange in the field of personnel certification.

It creates basis for experts, examiners and certificates holders exchange.

It will help to develop special improved criterion to operations of personnel certification that will take into account specific requirements of industrial sectors and various NDT methods.

In spite of the fact that the System is registered in State Register of voluntary certification systems it keeps good relations and cooperation with Russian Federal Agency on technical regulation and metrology (former GOSSTANDART) on issues of information presentation relevant to certification processes, mutual training of experts participating in conformity assessment within the System frames, conducting mutually interesting and important actions.

The members of the Governing Council and the Central Body are the most qualified, experienced scientists, specialists and patricians in the field of NDT and technical diagnostics. Involvement of most knowledgeable specialists helps to maintain the quality of personnel training and certification at high level.

Conclusion

Newly developed voluntary System of personnel certification in the field of NDT and technical diagnostics maintained by the Russian Society for NDT and Technical Diagnostics provides better understanding of processes in this area worldwide. Strong relations of the RSNTTD with European and world NDT community help to follow up modern tendencies. Latest documents and activities in certification process harmonization are presented to Russian companies and institutions using services of NDT specialists. Through this system latest decisions and results become known to those who benefit from NDT. Improvement of specialists' competence and qualification makes our world safer and better.