

NDT Personnel Certification – Service for Industry

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Abstract The paper considers the relationships among the certification body for NDT-personnel within Reaktortest Ltd. company, accreditation organisation and industry in the Slovak Republic.

On one side, there are many special industry needs how to get a qualified and certified personnel and on the other side, there is a potential of certification body, which represents the third party certification of NDT personnel. A possibility of how to fulfil the needs and ideas of employers of NDT staff is to create rules and internal standards for various NDT methods (if it is covered by European, international or national standards) and cover plenty of industrial sectors for specific production. However, this situation leads to large systems with many small specialized qualification programmes.

The certification body provides many accredited systems, resulting in both, the costs for implementation and accreditation, and the prices of certification services increase.

In order for the certification body to succeed in the „crowded“ market it has much to deal with, in terms of: customers, competitors and the accreditation involved.

This paper will cover this above - mentioned topic and other existing problems in the process of qualification and certification of NDT personnel.

Introduction

The company Reaktortest has a great deal of experience in organizing and performing NDT examinations, such as the certification body of NDT personnel. We started 10 years ago and during these 10 years, there have been many changes. First we were accredited according to EN 45013 and EN 473 (first edition), later in October 2000 a second edition, connected with the European Pressure Equipment Directive, was published and we were reaccredited.

Now, since 2005, we have worked according to the standard ISO/IEC 17024. I think most of the accredited European certification bodies for NDT personnel, are applying for this standard which was aimed at harmonisation in this part of Europe.

We were accredited by the Slovak National Accreditation Service - a member of the European Accreditation committee. During the past few years we have had to react to the requirements of the customers and market. It has led to the increase of various systems which we offered, but it is very expensive to fulfil the requirements of many different technical branches and to build a huge system created by many small certifications programmes.

Service for industry

We have added the following accreditation systems to the classic EN 473:

- ISO 11484 – Steel tubes for pressure purposes – Qualification and certification of non-destructive testing (NDT) personnel. We offer the employer external qualification and certification system of NDT personnel.

- PED 97/23/EC – Pressure equipment directive – for the approval of personnel issued route A according to the „Code of practise for the approval of NDT personnel by recognised third party organisations, under the provisions of Directive 97/23/EC“. According to Slovak law is mandatory to be approved by Slovak Office of Standards, Metrology and Testing as the Authorized Body.
- EN 970 – Non-destructive examination of fusion welds: Visual examination. The law termed „Water law“ took into force in our country last year and directly determined conditions for storage of hazardous materials in tanks and pipelines. It describes requirements for the qualification of NDT personnel: Who is qualified to test the tanks and pipelines and their hazardous materials and approve enviromental safety of them. One of the necessary qualifications is, according to EN 970. This system is very usefull in the welding processes in some factories as a first control of products. The advantage of it is that it doesn't take too long time to train and qualify the operation staff, and obviously the costs are much lower compared to EN 473.
- EN 14127 – Ultrasonic thickness measurement – is also connected to „Water law“.
- corrosion protection of steel structures ENV 12837 – Paints and varnishes – Qualification of inspectors for corrosion protection of steel structures by protective paint systems. We are now preparing the procedures of the qualification examination. This part of NDT qualification is not often used in practical experience as other mentioned qualifications.

Currently we are preparing to adopt ISO 9712, as we would like to offer our services to clients outside the European Union and as is well-known. These countries are interested in having qualifications according to ISO 9712 as the audits of customers are focused on the requirements of this standard and production is generally based on the American standards.

We would like to ensure our customers that certificates issued by COP RT guarantee:

- a high level of personnel knowledge
- an acceptance of companies worldwide
- reliability of personnel by identification and evaluation of defects

Our aim is to ensure the objectivity and effectiveness of the qualification and certification based on the:

- trustworthiness
- independence of examiners
- impartiality and independence
- effective organisation of examination
- possibility of customer auditing
- personal outsourcing of examiners

CB arranges the examinations in co-operation with experts who have reached the highest Level – Level III and work as NDT-specialists in different companies such as research institutes, industrial manufacturing companies and service organisations.

We use, for the practical reasons, rented equipment such as: the RT bunkers with X-ray and Gamma-ray source, equipment for ET and ultrasonic testing, yokes for MT, all devices for pressure methods and tracer gas methods for LT.

We co-operate with companies who have proofof an established calibration system for their equipment, or who are an accredited laboratory according to standard EN 17 025, exclusively.

Experience and remarks

1. The customer expects good results for a good price. How do you explain to an employer that his staff were not successful in the qualification exam? It is very difficult to explain, that he/she will need to invest increasing amount of money as his/her staff need to repeat an exam, or need education/ qualification training which is necessary to a qualified NDT expert. In my opinion, it is the responsibility of the employee to foresee future risk, if the personnel are unqualified to create protocols and ensure product quality for customers. If personnel are not qualified and therefore make mistakes or fail to properly inspect products, a loss of money or a life threatening situation could follow. There is an important question about competitors. If the other CB has a very high rate of success of a candidate through a qualification examination, it is not easy to keep position of fair worked CB. That leaves room for an accreditor to audit all procedures and processes, if they work according to the criteria of accreditation.
2. The certification market is saturated. One way to fulfil expectations of our customers, is to offer variety of services. However, this leads to a large system with many small special qualification programmes. The certification body should then provide many accredited systems. This will result, in both the costs for implementation and accreditation , and the prices of certification services to increasing. Accreditation processes cost a lot money and obviously audit in each year too. But there exist a few special worlds concerned with the qualification and certification in special branches, such as the railway, aerospace, car production etc., with their own rules such that there isn't place for a third party organisation accredited according the general standards. It became clear to us, that we have to increase our offers to rational and effective count of systems.
3. Next lap of business, is intern systems in big corporations. At this point, many factories, in our country's developed car industry, don't require the use of a 3-rd party organisation-certification body. Internal rules of corporation supported by special standards and codes for production determine the requirements for the knowledge and experience of technical personnel, without the need of a central system. The training process is done within the framework of corporation rules, and therefore qualification and certification is, in most case not necessary.
4. This year we have started with the programe of qualification for unemployed people under the condition of European structure fond. This is an opportunity for the people to change or improve their previous knowledge and qualifications, and to help them to be successful in the working market. They used to use a system of qualification and certification according to EN 473.
5. I participated in a meeting with the technical committee concerned with the terminology of the norms of the 17-thousand families 3 months ago. As help representant of language institute was nominated. The discussion was very intense and at the end we couldn't find a conclusion for an adequate translation of english words to our language, for example: competence, ability, capability, etc . This is evidence that, not only the application of new or reedited standards into the practice is complicated, but the first step to find definitions in each language is very important for users of the standards in the context to the rules and requirements of national legal system.

Conclusion

CB offers many systems of NDT personnel qualification and certification according to actual international standards and we are convinced that our activities will improve the quality of production as well as safety aspects and professionalism of NDT personnel, and most importantly, the customers will be satisfied with our services.