

NDT Certification in Turkey as an European Country - How It Couldn't Work as the Only Example?

Galip BÜYÜKYILDIRIM, Yeditepe University, Istanbul, Turkey

Abstract. At the moment Turkey is the only country in Europe without a membership in EFNDT. The paper presents the history of the NDT certification in Turkey and today. The needs of the industry are developing faster, then the NDT certification organizations. It is obvious, that some changes will occur soon. But what will be the effect in the country and European Region.

5 Organizations in the country and some international companies are doing certification according to EN 473, SNT-TC-1-A and PED 97/23/EC. Until 2006 more than 2000 certificates are issued and some of the holders have several certificates for the same method and same level. This was also the case in other countries well, the paper wants to discuss, how can Turkey use these experiences.

Introduction

First time the need of NDT appeared in Turkey at the end of 60's and it was because of the construction of the first bridge between Asia and Europe. The Turkish National Research Center (TUBITAK/MAM) and Turkish Atomic Energy Authority (TAEK) were mainly interested about this subject at that time. After some years and having some experience on the field of NDT, it began with the certification in the year 1980 according to SNT-TC-1 with AWS and the first certificates were issued in 1982.

From TÜV-Stuttgart, course participation documents have been issued in 1986 for one company, which had the equality of a certificate at that time because of the gap by the needed personnel. At that year the ASNT certificate holders in Turkey tried to fill this gap. Technical University of Istanbul was offering NDT courses for RT (1986) and Middle East University in Ankara (METU) started the project for establishing a welding and NDT center with the collaboration of DGZfP in 1990. This was the first in Turkey, lasted until 2002 with the participation of the Chamber of the Metalurgical Engineers and now the university becomes a NDT center by its own. The Technical University of Istanbul discontinued after 1998 and its group joined the Turkish National Research Center. TSE (Turkish National Standardization Institute) had interests for NDT certification and began to work as an certification body (1999). The Yeditepe University did certification from 2002 to 2005.

Today different organizations are involved in the country for NDT certification according to TS EN 473 and ASNT based Level 3 certification. For TS EN 473 :ISIM, MAM, METU, TAEK, TSE ; for ASNT based Level 3: TÜV-Nord and BINDT ; for PED 97/23/EC: ISIM and TÜV-Nord.

The holders of ASNT Level 3 are issuing certificates according to SNT-TC-1A and doing this mostly for companies producing for U.S. based market.

The main areas for NDT are welding (85%) and foundry (10%). On the methods RT (80%), UT (10%) and PT-MT (10%) are the widely used.

1.Certification Requirements

All of those organizations are having their own implementations of the given standards, which is not less, but sometimes more difficult. The experience time could be only given by the companies and not possible to control easily. Education is in most of them within higher limits and because of having no NDT society in Turkey the requirements show a big variety. Because of the working area of the employees, different fields and processes could not be covered by the certification.

2.Certification

The collaboration with DGZfP was a good solution and opportunity. But the center in Ankara was at that time away from the main industry area, which is today in around Istanbul (80 %) and first Level 3's were mainly from chemical engineers. On the other hand nearly all of them were from the government and not directly from industry.

A NDT community wasn't founded in Turkey and it wasn't possible to have discussions between the NDT groups. Many problems remained until now, most of the organizations were offering courses, exams and certification as a single unit. TS EN 473 and the accreditation process made it to history now. The solution was to issue examination records, no certificates or to work with a foreign organization for issuing certificates, which could be also on PED 93/27/EC basis.

The traceability of certification is a big problem and many parties haven't any idea how to do it. Some organizations discontinued their activities and the control of the authenticity from foreign parties is difficult. At the moment nobody could give even an approach to the real number of the issued certificates, this number is some thousands. For example Yeditepe University had 250 certificates in different methods from 2003 to 2005, mostly in RT.

3.Methods

More than 80 % of the participants want to have RT Level 1 and 2. As the second request surface methods like MT and PT are placed with the excess of PT. UT is the last need and only a few experienced technicians exist. For LT, no certification is asked and ET is used for the aviation.

4.Conclusion

The current status points to a rapid change from RT to UT for many application areas, which means new certification needs. Even the improvement by digital UT equipments was a big challenge for all and now the phased array is on the use. This will trigger a new certification period. New methods must be implemented like ET and TT.

On the other hand the most important question will be the accreditation of the training and certification bodies. According to TURKAK (Turkish Accreditation Agency), there is only one for 4 main methods in Level 1 and 2, the NDT-Center at METU (Middle East Technical University) in Ankara.

In this time of the united Europe, the influence of the NDT based organizations outside of Turkey will continue to affect the development of the certification structure. To create a NDT society in the country will also help for creating this.