



Introduction

As usual I will begin with a brief review of the Certification document status as of today. There have been no further changes to the documents since last month. However, the discussions to bring together EN 4179 and NAS 410 continue; there is also a proposal up for consideration in the next review of ISO 9712 which considers 'recertification without re-examination' - a sort of perpetual renewal for NDT Certificates; this may, in turn, be adopted by EN 473 in due course. The effect of this would be to make the employer's role in respect of the operator's authorisation to work much more important as he would need to closely review the last time that the candidate was actually examined on practical samples to ensure he (the employer) was confident about the technician's continuing competence. That said, let us move on to this month's subject – Work Experience. This Article will review the different attitudes towards Work Experience by the major documents - SNT-TC-1A and associated employer-based standards, EN 4179, NAS 410 and the Central Certification Programmes EN473/PCN/ISO9712 .

Definition

Generally speaking, all systems are agreed that work experience is work activities in the applicable NDT method and field of application concerned, which leads to the acquisition and maintenance of the required skill and knowledge. Some systems require that this work experience is obtained under qualified supervision. Others hold that experience includes the performance of the NDT method and related activities, but not time spent in organised training programmes. PCN clarifies one area by stating:

"Experience may be acquired either prior to or following success in the qualification examination. However, candidates are advised that their chances of success in a PCN examination may be significantly reduced if they have no current experience in the application of the NDT method concerned. In the event that the PCN examination has been passed by a candidate lacking the experience required before certification, BINDT will issue a letter of attestation to the successful candidate indicating that he has passed the qualification examination and needs only to meet the experience requirement in order to be certified."

This provides for the 'chicken and egg' situation where potential NDT technicians complain that they cannot get work experience without a certificate, and this statement is seen as a way of allowing candidates to take a PCN exam without NDT experience, but only receiving their Certificate upon satisfactory statements of completion of the current amount of work experience.

Time Required for Levels 1 and 2

The time required for work experience is, however, far less clear than you might imagine. The PCN/EN 473 programme uses a simple table of 'months' work experience based on 160 hours per month.

In all cases qualification direct to Level 2 is the accumulated times at Level 1 and Level 2, e.g. PT Level 1 – 1 month; Level 2 – 3 months; direct to Level 2 – 4 months.

NAS 410/EN 4179 in the same example asks for work experience times in hours and for Level 1 PT this is 130 hours; Level 2 – 270 hours; direct to Level 2 – 400 hours. Now, if we take a working week as 40 hours, this is just 10 weeks for these documents as opposed to 4 months for PCN/EN 473.

For SNT-TC-1A 2001 we have two Tables, one giving 1 month (Level 1 PT) and 2 months (Level 2 PT) respectively and an alternate table, which gives experience requirement for PT Level 1 as 1 month or 70 hours; Level 2 at 2 months or 140 hours; direct to Level 2 – 210 hours or 3 months. Now here we have a clear dilemma. NAS 410/EN 4179 regard 1 month's

work experience as being equivalent to 130 hours whereas SNT 2001 considers 1 month as being 70 hours.

In practice this is all extremely confusing. What is a month work experience equal to – 130 hours or 70 hours? Clearly the quickest way to obtain work experience for PT Level 2 is to consider the alternate table to SNT-TC-1A 2001 and do 210 hours or, in my estimate of a working week, about 6 weeks!!

This SNT document alternate Table also introduces a Time Frame within which the work experience must take place:

“Work time experience per level shall be required over the time frame in ½ to 3 times the months shown and shall include a minimum of the hours shown in the specific method for which certification is sought.”

This means that a candidate who was qualified and carried out Penetrant Testing some years ago and has come back into the industry finds that his work experience is not relevant and he must make himself re-eligible by carrying out further work experience within the appropriate ‘Time Frame’.

Credit

All systems agree that credit can be gained by work experience in other NDT methods and the following is a common statement:

“Credit for work experience may be gained simultaneously in two or more of the NDT methods covered by this document, with the reduction of total required experience in each method as follows:

- Two testing methods – reduction of total required time by 25%
- Three testing methods – reduction of total required time by 33%
- Four or more testing methods – reduction of total time by 50%”

In practice, however, most candidates do not keep a full log of their work and many would be pushed to confirm that they carry out NDT in one method for constant periods of time. It is generally accepted that the Employer must appreciate his responsibility in attesting to a candidate’s work experience and that a lack of work experience will seriously harm the candidate’s ability to pass the examination.

Time Required Level 3

Generally speaking the work experience for qualification to Level 3 assumes initial certification to Level 2 and then the following years of work experience depending upon the candidate’s education level.

Minimum experience requirement for Level 3

| Approval | Degree | Experience |
|--|--|------------|
| Level 2 | No degree or diploma | 4 years |
| Level 2 | Successful completion of technical school or at least two years of engineering or science study at an accredited college or university | 2 years |
| Level 2, or equivalent work experience | Graduate or successful completion of at least three years accredited science or engineering college or university | 1 year |

PCN/EN 473 additionally allows for a candidate who has not had time served as a Level 2 as follows, but will, during the course of the exam, successfully complete a Level 2 practical exam for that method:

| | |
|--|-----------|
| Graduate of at least three years accredited science or engineering college or university programme | 24 months |
| Successful completion of technical school or at least two years of engineering or science study at an accredited college or university | 48 months |
| No degree | 72 months |

Further note for PCN/EN 473, if the college or university degree is issued in non-destructive testing, the experience required for access to Level 3 may be reduced by 50%.

Conclusions

1. There are considerable disparities in the meaning of a month's work experience between the various NDT Certification documents.
2. The employer must clarify in his Written Practice the exact parameters relating to time served as work experience prior to certification of the operator.
3. Work experience in NDT may be gained in many ways and these should be clearly addressed in the Written Practice.
4. The use of a Log Book should be recommended for all NDT personnel.