HOW TO MERGE EN 473 CERTIFICATION AND EN 4179/NAS410 QUALIFICATION IN AUSTRIA

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Abstract:
The Austrian Society for NDT (ÖGfZP) supervises examinations for the NDT personnel as an accredited, independent certifying body (CB) following EN 473 and as outside agency for EN 4179/NAS 410, recognized by the National Aerospace NDT Board (NANDTB Austria).

ÖGfZP has contracts with 4 established training centres and with 3 recognized examination centres. EN 473 certification started with June 1993. Until the end of 2006 more than 6000 certificate-holders were supervised.

December 2004 the ÖGfZP sector-committee "Raum- und Luftfahrt" offered a platform, on which the members of the Austrian Aviation Industry and one observer from the National Aviation Authority (NAA; Austro Control) founded the National Aerospace NDT Board (NANDTB- Austria).

The NANDTB Austria was acknowledged by NAA with May 19, 2005 as a Committee of the Austrian society for Non-destructive Testing.

NAA accepted the following statement of NANDTB Austria:

(1) Operators which are already qualified and certified to EN 473 with a minimum of 3 years NDT experience are eligible for Grandfathers Right.
(2) EN 473 Level 3 operators with a minimum of 3 years NDT experience, but without level 2 certification may receive a certificate (not qualified to conduct NDT for acceptance of parts) after a 2 days differential course with specific examination.
(3) EN 473 Level 2 operator with a minimum of 3 years NDT experience need additional differential training course for special aerospace NDT techniques and materials with specific examination including general and specific questions and practical examination.

There are two lines to receive Level 1 and 2 EN 4179/NAS 410 qualifications.

Introduction:
Education and qualification of NDT personal in Austria has a long tradition.
The manufacturing companies VOEST AG., Linz and Böhler Edelstahl AG.
Kapfenberg already have employer-oriented NDT-training in the 70ies
using the scheme of the ASNT TC1A.
At the end of 70ies the need of the European industries became evidence, to supervise qualification and certification through a Third Party Organisation.
The representatives of the Austrian economy and the supervising organizations worked on the 3-part standard about training - and qualification. ÖNORM M 3040 was developed at the Austrian standardization-institute. At this time only France and Austria had a NDT-trainings- and qualification regular through a standard.

Austrian Society for NDT (ÖGfZP)
The Austrian Society for NDT (ÖGfZP) was established 1979. She was responsible for supervising examinations and for produces of testimonies in accordance to ÖNORM M 3040.
Since June 1993 the ÖGfZP supervises examinations for the NDT personnel as an accredited, independent certifying body (CB) following EN 473, or ISO 9712.
Until the end of 2006 more than 6000 certificate-holders were supervised.
ÖGfZP has contracts with 4 established training centres and with 3 recognized examination centres.

National Aerospace NDT Board AUSTRIA (NANDTB- Austria)
December 2004 the ÖGfZP Sector-Committee "Luft - und Raumfahrt" (in accordance with EN 473) offered a platform (recommendation by EFNDT), on which the members of the Austrian Aviation Industry and one observer from the National Aviation Authority (NAA; Austro Control) founded the National Aerospace NDT Board (NANDTB-Austria).

Actual members are Böhler Edelstahl GmbH, Kapfenberg; Austrian Technik, Schwechat; Diamond Aircraft Industries GmbH., Wiener Neustadt, FACC Fischer Advanced Composite AG., Ried; Pankl Drivetrain Systems GmbH, Kapfenberg; MAGNA STEYR Fahrzeugtechnik AG & Co KG.; Engineering/Division Space Technology, Graz; Austrian Airforce, Fliegerhorst Vogler, Hoersching.

The ÖGfZP Sector-Committee "Luft- und Raumfahrt" was acknowledged by NAA with May 19, 2005 as a National Aerospace NDT Board in accordance with prEN4179, 2003 and NAS 410, Rev 2, Feb 2003.
In May 2005 the ÖGfZP was recognized by the National Aerospace NDT Board (NANDTB Austria) as an outside agency according EN 4179/NAS 410,.and since this time the ÖGfZP is also qualifying NDT personnel according EN 4179/NAS 410.

How ÖGfZP merge EN 473 certification and EN 4179/NAS410 qualification
NAA accepted the following statement of NANDTB Austria:

Grandfathers Right for EN 473 Level 3 NDT personnel (paperwork checked and accepted by the NANDTB Austria)
(1) Working for a prime contractor, a PART 145 Approved Maintenance Organisation or for the Airforce with a minimum of 3 years experience as Level 3
(2) Working for a PART 21 organisation (sub-contractor) with a minimum of 3 years experience as Level 3 and also authorized from prime contractors as Level 3 (e.g. Boeing, Airbus, Rolls Royce)
or
Working for a PART 21 organisation (sub-contractor) with a minimum of 5 years experience as Level 3 and the main duties are non destructive testing of components for aerospace according inspection procedures from prime contractors.
Above NDT personnel may receive a certificate as EN4179/NAS410 NDT Level 3. Qualified to conduct NDT for acceptance of parts or not will be determined by the NANDTB Austria.

All other EN473 NDT personnel must receive a 2 days differential course with specific examination and when the individual's duties will include inspection or evaluation of products a practical examination equivalent to Level 2 is necessary.

EN 473 Level 1 and 2 personnel need additional differential training for special aerospace NDT techniques and materials with specific examination including specific questions and practical examination. The minimum experience time according EN4179/NAS410 apply.

There are two possibilities to receive EN 4179/ NAS410 qualifications for Level 1 and 2 candidates
(1) The candidate visits one of the a. m. ÖGfZP contractors, working as an outside agency, for an EN 4179/NAS 410 course and examination under ÖGfZP supervision.
(2) The candidate visits one of the a.m. ÖGfZP contractors for EN 473 training and examination after a minimum of xxx hours (belong to the method) NDT experience in addition he completes differential training hours for special aerospace NDT techniques and materials with specific theoretical and practical examination.

There is also a possibility for EN 4179/NAS 410 qualified NDT-personal Level 1 and Level 2, to become EN 473 or ISO 9712 certification.
(1) Personnel which are already qualified to EN 4179/NAS 410 Level 1 with a minimum of 3 years NDT experience are eligible for EN 473/ISO9712 Level 2 certification, using the possibility of direct access to Level 2 examination. In this case the CB will accept the training course for Level 1 EN 4179/ NAS 410.
(2) Operators which are already qualified to EN 4179/NAS 410 Level 2 with a minimum of 3 years NDT experience are eligible for EN 473/ISO9712 Level 2, if they can produce the proof, that the sector welding (w), was part of there EN 4179/ NAS 410 examination. Those candidates have to pass successfully a (EN 473/ISO9712) recertification examination.

This scheme offers a cost-effective, norm-concurring qualification/certification merging for EN 4179/NAS 410 NDT examiners in small countries.

Examples of an additional training for authorized EN 473 PT Level1 and 2 personnel to become Level 1 or Level 2 EN 4179/NAS410:
* The EN 473 NDT candidate with Level 1 or 2, after a minimum of 130/270 hours NDT experience has to complete an additional training of at least 8 hours. This comprises information and discussions over several standards like ASTM E1417.

* Practical training are enforced with fluorescent penetrant systems (as well post emulsifying-system) with airplane-certain sharing's.
* The qualification examination includes 10 additional general questions (Pa), 10 specific questions (Ps), worked for which of the employer and pretends.
The practical examination at a specimen, coming from the employer's site, becomes with fluorescent penetrant system (high, ultrahigh as well as emulsifying-system), executed and documented.

Examples of an additional training for authorized EN 473 UT Level 1 and 2 personnel to become Level 1 or Level 2 EN 4179/NAS410:
* The EN 473 NDT candidate with Level 1 or 2, after a minimum of 400/1200
hours NDT experience has to complete an additional training of at least 8 hours. This comprises information and discussions over several rule-works like SAE AMS-STD-2154 introduced and discussed as well as practical practices at CFK-test samples of the candidates enterprise, with different NDT technique.
* The qualification examination includes 10 additional general questions (Pa), 10 specific questions (Ps), worked for which of the employer and pretends.
The test samples for the practical examination may come from the employer's site. Direct contact, immersion technique, or Phased Array may be part of the practical examination.

Each method will have its specific certification-process. (like exemplary)

Picture: CERTIFICATION PROGRAM for Aerospace: Auxiliary Training Requirements

CERTIFICATION PROGRAM for **Aerospace:** Auxiliary Training Requirements

ET 1 and ET 2 certifying in accordance with EN ISO/IEC 17024

Conditions for admission after EN 4179 and NAS of 410 for EN 473 certificate holders:

1. Experience time in accordance with EN 4179
2. Physical suitability
3. Auxiliary training in a recognized Outside Agency
4. Training aims

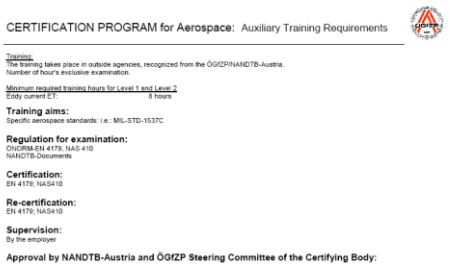
Experience times must be proven to examiner permission before the auxiliary qualification effected via the employer
The experience time has to be furnished before the course and/or examination.

Experience time for Level 1
Experience time in the method:
Eddy current ET: 400 hours

Erfahrungszeiten für Stufe 2
Experience time in the method:
Eddy current ET: 1200 hours

Experience times for Level 1 and 2 may be accumulated simultaneously for two or several ZfP procedures: Reduction around 50%

Physical suitability for all qualifying examinations (qualification Levels):
The investigation on physical suitability must before the examiner permission take place and must prove that the near vision acuity and the colour perception test of the candidate fulfil the following requirements:
Near vision acuity: Jaeger number 1 or equivalently, in not less than 30 cm in at least one eye, natural or corrected.
Colour Perception: The personnel shall be capable of adequately distinguishing and differentiating colours used in the Process involved.



CERTIFICATION PROGRAM for **Aerospace:** Auxiliary Training Requirements

Training:
The training takes place in outside agencies, recognized from the ÖGfZP/NANDTB-Austria.
Number of hour's exclusive examination.

Minimum required training hours for Level 1 and Level 2
Eddy current ET: 8 hours

Training aims:
Specific aerospace standards: i.e.: MIL-STD-1537C

Regulation for examination:
ÖNORM-EN 4179, NAS 410
NANDTB-Documents

Certification:
EN 4179; NAS410

Re-certification:
EN 4179; NAS410

Supervision:
By the employer

Approval by NANDTB-Austria and ÖGfZP Steering Committee of the Certifying Body:

How does it work?

It is the size of Austria, doesn't make possible to organize true EN 4179/NAS 410 courses and qualifications. The exception are closed indoor - qualifications in big enterprises.

The ÖGfZP and their contractually after EN ISO/ IEC 17024: 2003, and EN 45013 trainings- and examination centres developed a modular system, in which the requests of different training-contents and examination-schemes are taken into account.

As basis, they serve EN 473 and the training syllabuses CEN ISO/TR 25107.
EN 473 certifications in Austria are in principle multi sector ally and includes the product sectors w, f, and c.
EN 473 demands no customized trainings- and examination-specimens for the sartorially education as well as certification.
Courses where candidates for EN 473 and for EN 4179/NAS 410 are together, training and specimens for EN 4179, as well as special NDT-techniques for the relevant method are recited and practiced for all candidates.
The candidates for EN 4179 qualifications -Level 1 and 2 - participates at the EN 473 examination. After he has successfully passed the EN 473 examination he will have an additional EN 4179/NAS410 qualification-examination with additional questions (Pa+Ps) as well as specific examination-specimens (Master sheet worked for an EN 4179 Level 3 examiners) coming from the candidates enterprise.

This EN 4179/NAS 410-examination is supervised through an external EN 4179 Level 3 ÖGfZP examiners, in accordance with the "Written Practice" of the candidate's enterprise, as an outside agency.

Summery:
This scheme is approved by the NANDTB-Austria and ÖGfZP Steering Committee of the Certifying Body. It offers a cost-effective, norm-concurring qualification/ certification, merging EN 473 certification and EN 4179/NAS410 qualification in Austria.