

Interpreting

SNT-TC-1A

ninth edition

Interpretations from 1976 through 2011.



The American Society for Nondestructive Testing



Documents

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Inquiries are numbered to include the year of the inquiry and always refer to the edition of *SNT-TC-1A* in effect in that year, unless otherwise stated in the question. *SNT-TC-1A* was published in these years: 1968, 1975, 1980, 1984, 1988, 1992, 1996, 2001, 2007 (2006 edition), and 2011.

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ASNT Mission Statement:

ASNT exists to create a safer world by promoting the profession and technologies of nondestructive testing.

Introduction

The *SNT-TC-1A* Interpretation Panel was established to respond to written inquiries about *Recommended Practice No. SNT-TC-1A, Personnel Qualification and Certification in Nondestructive Testing*.

Following are responses by the panel to inquiries submitted from 1976 through 2011. The responses clarify the intent of ASNT's Technical and Education Council and the recommendations of *SNT-TC-1A*.

Inquiries are numbered to include the year of the inquiry and always refer to the edition of *SNT-TC-1A* in effect in that year, unless otherwise stated in the question. New editions of *SNT-TC-1A* were published in these years: 1968, 1975, 1980, 1984, 1988, 1992, 1996, 2001, 2007 (2006 edition), and 2011.

Users of *SNT-TC-1A* are reminded that the document is intended as a guideline for employers to establish their own written practices for the qualification and certification of their nondestructive testing personnel.

The responses of the *SNT-TC-1A* Interpretation Panel are clarifications of

intent and are subject to the statement of "Scope" in each edition of *SNT-TC-1A*, such as the 1980 edition, Paragraph 1.4, "It is recognized that these guidelines may not be appropriate for certain employer's circumstances and/or applications. In developing a written practice as required in Paragraph 5, the employer shall review the detailed recommendations presented herein and shall modify them as necessary to meet particular needs."

Guidelines for Inquiry Preparation

The following guidelines for preparing an inquiry to the panel will expedite consideration and response to the inquirer. Each inquiry should be limited to a single recommendation of *SNT-TC-1A*. Inquiries concerning multiple recommendations of *SNT-TC-1A* or unrelated subjects may be returned for further clarification.

The specific question to be answered by the panel should be distinctly set apart from the body of the letter and in a condensed, precise, question format, omitting superfluous background

information and, if possible, asked in such a manner that a "yes" or "no" (with a short explanation) would be an acceptable reply.

The background explanation for the question can be prepared separately from the question. It should state the purpose of the inquiry, which could be to obtain a clarification of the document's recommendations or the intent of ASNT's Technical and Education Council; provide concisely the information needed for the panel's understanding of the inquiry and include references to applicable paragraphs of *SNT-TC-1A*, including date of edition. Sometimes it helps the panel members' understanding if the inquirer includes—set aside from the body of the letter—a "proposed response" at the end of the letter. Do not solicit from the panel an opinion or interpretation of an employer's written practice, nor of another party's opinion of an employer's written practice.

Inquiries should be sent to the attention of the Chair of the *SNT-TC-1A* Interpretation Panel, ASNT, Technical Services Department, 1711 Arlingate Lane, PO Box 28518, Columbus, OH 43228-0518.

Inquiry 76-1

Table 6.2.1A contains the statement “Credit for experience may be gained simultaneously in two or more disciplines. The candidate must spend at least 25 percent of his work time on each discipline for which experience is being claimed.” Our question is this: Over what time period does the term “simultaneously” apply?

Response

The employer’s written practice should specify the time period over which simultaneous experience shall be credited.

Inquiry 76-2

1. For requalification of Level I and II NDT personnel, does Paragraph 6.2.1 imply that you must keep continuous records by the hour showing that the individual has continuously spent at least 25 percent of his work time working in each method to which qualified?
2. Because of the 25 percent used in the note to Table 6.2.1A, it has been implied that an individual at maximum could be qualified in only four methods and this would be true only if he could show that exactly 25 percent of his work time was spent in each of four methods. Was this the intent of *SNT-TC-1A*?

Response

1. No. Table 6.2.1A applies only to initial experience required for qualification; it is not applicable to requalification.
2. No. The candidate may be qualified in as many methods as desired. The 25 percent work time experience only applies to the work time experience required for initial qualification in each level for each method. The 25 percent is not applicable and is not required for the individual to remain qualified in a particular method at a specific qualification level.

General Comments

Paragraph 6.2.1, like the rest of *SNT-TC-1A*, is only a guide. The employer’s written practice should detail all such requirements, which may differ from the recommendations of Paragraph 6.2.1.

Inquiry 76-3

Is it the intent of *SNT-TC-1A* that the Level I NDT persons described in

Paragraph 4.3(a) of the 1975 edition of this document be the same as the Level I individual described in the *SNT-TC-1A* (1968 edition) Paragraph 4.1(a) with both having the same capabilities?

Response

Yes. The changes in wording between the 1975 and the 1968 versions of *SNT-TC-1A*, insofar as the duties and capabilities of Level I personnel are concerned, were intended only to clarify the intent of the document. None of these changes in wording were intended as substantive changes.

Inquiry 76-4

Paragraph 1.1 of *SNT-TC-1A* refers to individuals who “perform, witness, monitor or evaluate” nondestructive tests. Is it intended that individuals whose principal functions are to witness, monitor or evaluate nondestructive tests be qualified in the same manner as those whose principal function is to perform nondestructive tests?

Response

It is intended that the employer designate through the written practice as recommended in Paragraph 5 specific jobs that require knowledge of the technical principles of nondestructive testing. The employer should test the statement of Paragraph 1.1, “... personnel whose specific jobs require appropriate knowledge of the technical principles underlying the nondestructive tests they perform, witness, monitor or evaluate,” against the specific job elements of the personnel in question in order to establish whether or not the specific job requires knowledge of nondestructive testing.

Inquiry 76-5

In accordance with *SNT-TC-1A* (1975 edition), may a Level I NDT person who has been trained, qualified and certified in accordance with *SNT-TC-1A* (1975 edition) be the sole person to perform, evaluate and sign for final acceptance of NDT examinations in accordance with written procedures and acceptance standards with occasional surveillance and guidance from a Level II or III?

Response

Yes. The intent in *SNT-TC-1A* is that the Level I person may perform the above functions provided they are in accordance with written procedures and so documented in the employer’s written practice.

Inquiry 77-1

1. Is it intended that the 1975 edition of *SNT-TC-1A* including all recommendations therein completely replace prior editions of *SNT-TC-1A*?
2. Is it intended that personnel qualified and certified as recommended in the 1975 edition of *SNT-TC-1A* be considered equivalent to those qualified and certified as recommended in previous editions of *SNT-TC-1A*?

Response

The answer is yes to both parts of the inquiry.

Inquiry 77-3

With respect to Paragraphs 9.4 and 9.5 of *SNT-TC-1A*:

1. Is it the intent to restrict an employer to engage only Level III services from an outside agency or may Level I and Level II services also be utilized?
2. Is it intended in Paragraph 9.5 that an employer may subcontract training, examination and certification for all levels, provided the employer’s audit results are found to be satisfactory?
3. Paragraph 9.1 states that the certification of all levels is the responsibility of the employer. Paragraph 9.5 recognizes the use of outside certification services. May an employer subcontract nondestructive testing to an outside organization utilizing that organization’s certifications for Levels I, II and III, provided the results of the employer’s audit of that organization are satisfactory? Must the employer personally certify NDT personnel or may he accept the outside organization’s certification?

Response

1. It is intended that Level III services may be obtained from an outside agency for the purpose of training and examining NDT personnel. It is beyond the scope of *SNT-TC-1A* to recommend whether or not outside inspection services should be obtained. It is definitely not intended that the employer be restricted from utilizing any outside NDT services.
2. The intent of Paragraph 9.5 is to emphasize the responsibility of the employer to assure by audit that any and all parts of purchased services attendant to qualification and

certification of NDT personnel are within the same guidelines that the employer himself would follow in accordance with his written practice.

3. The intent underlying Paragraph 9.1 is fundamental. When outside Level III services are used for the purpose of qualifying and certifying personnel, it is intended that the employer utilizing such services be responsible for assuring that those services are properly performed and audited. Whether or not the employer uses outside Level III services for training and examining his NDT personnel, the total responsibility for certification of all levels rests with the employer of the individuals.

SNT-TC-1A only provides guidelines for qualification and certification of NDT personnel. Outside services referred to in Paragraph 9 are those intended to be used by an employer only for the purposes of training, examining or otherwise qualifying individuals directly employed by the employer.

When the performance of NDT is subcontracted to an outside organization and the outside organization is the direct employer of the individual performing NDT, the outside organization is the "employer" in terms of *SNT-TC-1A*. Whether the outside organization is properly qualifying and certifying its NDT personnel can only be determined by the purchaser of such outside services and how such determination is made is a contractual matter between the purchaser and the outside organization.

Inquiry 77-4

May the experience requirements expressed as "certified NDT Level II" in Paragraph 6.3.1(b), (c) and (d) of the 1975 edition of *SNT-TC-1A* be considered to include experience gained in "an assignment comparable to that of an NDT Level II" [as stated in Paragraph 6.3.2(a)] in determining the prerequisite requirements of a candidate for certification as a Level III? If so, may this acceptance of experience in "an assignment comparable to" be extended to include similar subparagraphs under Paragraph 6.2.5 of the earlier editions of *SNT-TC-1A*?

Response

Paragraph 6.2 of the 1975 edition of *SNT-TC-1A* states, "Documented training and/or experience gained in positions and activities equivalent to those of Level II or Level III prior to establishment of the employer's written practice and a

certification program in accordance with this document shall be considered as satisfying the criteria of Paragraph 6.2.1 and 6.3." If documentation was not produced during such prior experience, an affidavit or other suitable testimony regarding such experience may be evaluated by the employer to aid in determining equivalence. This response applies to the 1975 edition and all prior editions of *SNT-TC-1A*. See Inquiry 77-1.

Inquiry 77-5

With reference to Paragraph 8.5 of the 1975 edition of *SNT-TC-1A*, is it intended to limit the written specific examination to a closed book examination, without access to codes, specifications and/or procedures?

Response

It is intended that codes, specifications and/or procedures are "necessary data" under Paragraph 8.5 of the 1975 edition of *SNT-TC-1A*, provided that examination questions are asked that require reference to such data and that such data cannot be used to answer questions related to other closed book portions of the examination.

Inquiry 77-6

1. Is it the intent of *SNT-TC-1A* that Level I, II and III individuals certified to the recommendations of the 1968 edition meet the recommendations for certification in the 1975 edition?
2. If certification is transferred from the 1968 edition to the 1975 edition recommendations, which recommendations prevail regarding recertification?

Response

1. It is intended that individuals certified according to the recommendations of earlier editions of *SNT-TC-1A* meet the recommendations for certification in the 1975 edition.
2. The 1975 edition recommendations prevail regarding recertification. See also Inquiry 78-2.

Inquiry 77-8

Level III personnel certified by ASNT do not receive examination grades. Paragraph 8.6 of *SNT-TC-1A* recommends arriving at a composite grade. How can this be accomplished since ASNT only supplies examination results in terms of pass or fail?

Response

Published in *Materials Evaluation*, May 1978, page 21, is the "ASNT Position Paper on the Use of *SNT-TC-1A* and the ASNT Level III Certification Program." Under the heading "Certification Options" is the following:

[The employer can] Incorporate into his written practice acceptance of ASNT Level III certification as permitted in 9.4 of *SNT-TC-1A* for meeting any or all examination requirements of 8.5.3 (general, specific and practical) and assigning grading weight factors based on satisfactory performance, in accordance with 8.6.3 and 8.6.4.

Inquiry 77-10

What is the intent regarding employers' attempts to verify an individual's experience and performance with past employers in order to maintain the documentation recommended in Paragraph 9.6.1?

Response

The specific documentation to be furnished by new employees and past employers and the means for obtaining documentation is referenced in Paragraphs 9.6 and 10.2 of *SNT-TC-1A*. Details should be included in the employer's written practice.

General Comments

As published above and in *Materials Evaluation*, October 1977, in response to Inquiry 77-4, "If documentation was not produced during ... prior experience, an affidavit or other suitable testimony regarding such experience may be evaluated by the employer ..." While Inquiry 77-4 was related to a somewhat different matter, the intent behind the response applies equally to this inquiry (77-10).

Inquiry 77-12

1. Is it intended that an employer may use more than one outside agency for providing Level III services?
2. Is it intended that an employer may use Level III individuals in his direct employment and also use an outside agency for Level III services?
3. Is it intended that certification examinations may be administered without direct supervision and monitoring?

Response

1. There is no intent to restrict the number of outside agencies from which an employer could use Level III services.
2. Yes, both the above and this situation may be used under circumstances as described in the employer's written practice.
3. It is not intended that unsupervised examinations be administered.

Inquiry 77-13

Regarding Paragraph 8.5.3(a) of *SNT-TC-1A*, is it intended that the "30 questions from the NDT Level II questions for other applicable NDT methods" be selected from and represent every test discipline listed in Paragraph 8.5.2?

Response

No, it is intended that the examiner select the questions applicable or appropriate to the product requirements of the particular case. This is a specific recommendation for examining Level IIIs and in no manner conflicts with the Level III qualifications of Paragraph 4.3(c) of *SNT-TC-1A*.

Inquiry 78-1

If a Level II examination is administered to a Level I individual, is there a need, when that individual is eligible for Level II certification, to readminister the same Level II examination provided that all other criteria, for example, education, training and experience, have been satisfied?

Response

It is not intended that the individual should be reexamined, provided the original Level II examination was passed and all applicable requirements of the employer's written practice have been met according to Paragraph 8.1 of *SNT-TC-1A*.

Inquiry 78-2

See Inquiry 77-6, as published above and in *Materials Evaluation*, October 1977. In order to clarify the response, is it intended that Level I, II and III individuals who have been certified to the recommendation of the 1968 edition automatically meet the recommendations for certification in the 1975 edition?

Since the training hours were increased in the 1975 edition for certain level and discipline combinations above those recommended in the 1968 edition, is

additional training and reexamination required to upgrade these individuals?

Response

It is the intent that individuals certified in accordance with the recommendations of the 1968 edition can be automatically certified to the recommendations of the 1975 edition without additional training or experience. For recertification, it is intended that individuals should meet the guidelines of the 1975 edition as reflected in the employer's written practice.

Inquiry 78-3

With reference to the note in Table 6.2.1A, "Credit for experience may be gained simultaneously in two or more disciplines. The candidate must spend at least 25 percent of his work time on each discipline for which experience is being claimed," is it intended that an individual being qualified in only one method could obtain the work time experience in 25 percent of the times tabulated in Table 6.2.1A?

Response

No, an individual being qualified in only one method should spend at least 25 percent of his work time in that method and should obtain the total work time experience as recommended in consecutive months as though the remainder of his work time was spent in qualifying for other NDT methods simultaneously.

Inquiry 78-4

1. Regarding Paragraph 10.2 of *SNT-TC-1A*, does "... based on examination ..." refer to examinations administered during prior employment or does it refer to new examinations to be administered by the new employer?
2. An individual can provide evidence of prior certification per Paragraph 10.2(a), but does not meet either Paragraphs 10.2(b) or 10.2(c) which recommend that the individual was working in the capacity to which he had been certified and is being recertified within six months of his termination. What should be the basis of qualification for such an individual?

Response

1. It is intended that the examination referred to in Paragraph 10.2 be administered by the new employer.

2. It is intended that an individual who has neither worked in the capacity to which previously certified in the past six months nor is being recertified within six months should have additional training and experience prior to recertification. The employer's written practice should detail such provisions.

Inquiry 78-6

Is it the intent of *SNT-TC-1A* to recommend that the percented weight factors of Paragraph 8.6.3 may be applied based upon differing job requirements of individual candidates or should they be applied equally to all individuals within a particular level?

Response

Percentile weight factors should be within the ranges shown in *SNT-TC-1A*, Paragraph 8.6.3. The specific percentile weight factors used should be clearly stated in the employer's written practice and should be based on the particular needs of the employer. The same weight factors should be used uniformly for all the employer's personnel seeking certification for given job requirements. However, the employer may change or modify the weight factors for different job requirements within a single level provided they remain within the ranges recommended in Paragraph 8.6.3.

Inquiry 78-7

1. Should personnel who operate digital thickness measurement equipment be qualified and certified?
2. To what level should such personnel be certified?
3. Does ASNT anticipate a change in *SNT-TC-1A* that would provide specific recommendations for qualifying and certifying such personnel?

Response

1. Whether any NDT personnel should be certified depends solely upon the needs of the employer and the requirements of the employer's customers or clientele.
2. Likewise, the level to which personnel should be certified depends upon the same factors as in [1.] above. Note that Paragraph 4.1 of *SNT-TC-1A* provides for subdivision within the levels as needed.
3. Paragraph 1.4 and Paragraph 4.1 of *SNT-TC-1A* are intended to provide

the employer with adequate flexibility to accommodate a variety of special needs as documented in the written practice. While the recommended training course outline of *SNT-TC-1A* does not specifically address digital thickness measurement, the principles of pulse-echo techniques are those involved. The training course outline does not provide for instruction in the employer's specific equipment uses and, as with the remainder of *SNT-TC-1A*, the training course outline should be modified, if necessary, to meet employers' specific needs.

Inquiry 78-9

Is it intended that personnel currently certified as NDT Level III within the guidelines of *SNT-TC-1A* who also regularly perform Level II functions be qualified as recommended in Paragraphs 8.2, 8.5.2, 8.6 and 9.7?

Response

It is the opinion of the Interpretation Panel that personnel currently certified as Level III may regularly perform Level II functions without specifically being qualified as Level II as recommended in Paragraph 8.2, 8.5.2 and 8.6 of *SNT-TC-1A*. However, as recommended in Paragraph 9.7, all levels should be periodically recertified.

General Comments

Implicit in the definitions of Levels I, II and III as outlined in Paragraphs 4.3(a), 4.3(b) and 4.3(c) is the concept that the qualifications for Level III equal and exceed those of Level II. The employer must be satisfied with the proficiency of any individual at any level to handle work tasks. *SNT-TC-1A* is not intended for use to determine an individual's proficiency. It is intended as a guideline to establish qualifications.

Inquiry 78-10

1. When an employee returns to work for a former employer where he was certified, may the employee's certification(s) be reinstated without examination if the provisions of Paragraphs 10.2(b) and 10.2(c) are met?
2. If an employee has been continuously working for another employer certified in the same capacities, may his certification(s) be reinstated for the remainder of

the original three-year period of certification in accordance with Paragraph 9.7?

Response

1. The provisions of Paragraph 10.2 apply only to a new employer. For this part of the inquiry, the provisions of Paragraph 9.7.3 would prevail.
2. For this part of the inquiry, the receiving employer would be considered a new employer and the provisions of Paragraph 10.2 would apply. If, however, the employee in question was previously employed by the receiving employer, Paragraph 9.7.3 would prevail.

General Comments

The principle behind "evidence of continuing satisfactory performance" in Paragraph 9.7.1(a) applies to employees originally certified by, and in continuous employment of, one employer. It is not envisioned that a new employer should prudently accept "evidence of continuing satisfactory performance" from a previous employer. Note that Paragraph 10.2 recommends recertification by examination of an employee by a new employer even if the conditions of 10.2(a), 10.2(b) and 10.2(c) are met to the new employer's satisfaction. The employer's rules covering the duration of interrupted service (Paragraph 9.7.3) should bear a reasonable relationship to the recommendations in Paragraph 10.2. However, in the case of interrupted service, the employer has direct knowledge of the employee's prior performance and can best judge the need for reexamination as a function of duration of interrupted service.

Inquiry 78-11

1. Regarding Paragraph 8.2(a1) of *SNT-TC-1A*, is it intended that the personnel referred to in the statement, "The examination shall be administered by qualified personnel ..., " be qualified medical personnel or may a certified Level III person administer the near-distance vision acuity examination when a standard Jaeger test chart is used? It would appear that the qualifications necessary to administer such examinations would only include the capability to read, to identify the Jaeger chart and the appropriate parts thereof and to be able to measure and maintain the 12 in. required reading distance.

2. Regarding Paragraph 8.2(a2), is it intended that the statement, "... as demonstrated by the practical examinations or test performance," refers to the practical examination of Paragraph 8.2(d) or does it refer to a special standardized eye test for color vision?

Response

1. It is intended that Level III personnel be allowed to administer the near-distance vision acuity examination using the Jaeger chart. However, if the employer elects to use other methods of vision examination or the employer requires additional physical requirements as referred to in Paragraph 8.2(a3), it may be necessary to use personnel with other specialized qualifications to administer examinations for such additional requirements. The employer should include details of specific physical requirements and the qualifications required of examiners in the written practice.
2. It is intended that the practical examination referred to in Paragraph 8.2(a2) is that of Paragraph 8.2(d) and that such practical examination include checkpoints as appropriate to verify that the candidate's color vision capabilities are adequate to satisfy the specific needs imposed by the NDT method in question, the employer's test equipment, procedures and products.

Inquiry 79-1

In maintaining records, if an individual is working simultaneously in more than one method, should the records reflect the total time spent for each method or should the time be divided proportionately for each of the methods? For example, if an individual spent 50 percent of his time on ultrasonic testing and 50 percent of his time on radiographic testing for a period of nine months, should the record show experience in ultrasonic testing of four and one-half months or nine months?

Response

It is intended that the employer's written practice should include details of maintaining records. It is intended that records should reflect the facts of each individual's work time with regard to the amount of time spent on each method and the periods of time during which the work was performed.

Inquiry 79-2

Since NDT Level III general examination questions in some methods are available from ASNT (*Questions and Answers for Qualifying NDT Level III Personnel*, October 1977), is it intended that the Level III questions referred to in Paragraphs 8.4 and 8.5.3(a) be selected from those published by ASNT?

Response

It is intended that the recommended 30 questions devised by the examiner for the appropriate method [Paragraph 8.5.3(a)] be devised or selected as appropriate to the degree required by the employer's written practice. As with all questions and answers provided by ASNT, they are suggested as guidelines and supplied as an aid to employers in preparing examinations. It is intended that the provisions of Paragraph 8.4 be superseded when questions of a character unique to Level III qualifications as delineated in Paragraph 4.3(c) are devised or selected by the employer for use in the Level III general examination. The additional 30 questions from Level II questions for other applicable NDT methods as recommended in Paragraph 8.5.3(a) are intended to be selected from methods other than that for which the candidate is being examined. It is intended that the employer use such questions to determine that the candidate has sufficient knowledge of other NDT methods that might be applicable to the employer's particular circumstances. For example, it could be appropriate that a candidate being examined for Level III qualification in a particular method be required to demonstrate basic knowledge in one or more other methods in order to "designate the particular test method and technique to be used." See Paragraph 4.3(c).

Inquiry 79-4

1. In Paragraph 8.2(a1), reference is made to a "standard Jaeger test chart." Of several reading cards available, which is considered standard?
2. In Paragraph 8.2(a1), the recommended distance for reading Jaeger Number 2 letters is "not less than 12 in. (30.5 cm)." On the reading card currently available from ASNT, the "designated distance in decimeters" for J2 letters is 5 dm or approximately 19.7 in. Is it intended that the near-distance vision acuity requirements be reduced by such a significant factor?

Response

1. The reading card intended to be considered standard is currently available from ASNT and was previously supplied by Bausch & Lomb. Bausch & Lomb no longer supplies such cards, but those bearing the title, *Reading Card (Metric)*, with the notation at the bottom of the card reading, "The above letters are Snellen sizes at the designated distance in decimeters, with Jaeger notations at right," as previously supplied by Bausch & Lomb are equivalent to the card currently available from ASNT. Other cards bearing equivalent type size and body are also intended to be used.
2. The intent in Paragraph 8.2(a1) was to recommend a minimum distance. The employer's written practice should state the near-distance vision acuity requirements for the particular circumstances of the employer.

Inquiry 79-13

If an employee performs NDT to multiple codes, specifications and acceptance standards, is it necessary to include questions relating to each code, specification or acceptance standard in this Specific examination?

Paragraph 9.6.1(c) requires records of educational background to be included in personnel records. Is information supplied by the employee (i.e., such as a résumé or employment application) satisfactory evidence of educational accomplishments or is conclusive evidence (i.e., such as a copy of a diploma or transcript) required for verification?

Response

It is the intent of Paragraph 8.2(c2) that the Specific examination cover all codes, specifications and acceptance standards applicable to the employee's activities.

See also Inquiry 77-4 and Inquiry 77-10.

Inquiries 79-14 and 79-15

Is it intended per *SNT-TC-1A* (1975 edition) that the time spent in a laboratory exercise during a long term NDT course be considered the only qualifying work time experience?

May the laboratory time be given any credit at all as "work time experience" to satisfy all the requirements in Table 6.2.1A?

Response

It is not intended that laboratory experience in an educational program be directly applied to the work time experience. Laboratory experience is not necessarily applicable to the employer's product or to the specific codes, standards or specifications in use. However, in recognition of the benefits accruing from laboratory experience, the employer may include such consideration for adjustment to the work experience in his written practice. Should the employer decide to do so, he should thoroughly evaluate the curriculum to determine its applicability.

Inquiry 80-2

In reference to the practical examination, there are several approaches that may be taken. For example, grades on check points could be given as 1 (correct) or 0 (incorrect) or could be given in a graduated fashion, say 0 to 5, depending on the correctness and efficiency of the application. Which approach is correct? Could a questionnaire for which written answers would be prepared as an alternative method of grading be used?

Response

Please refer to Paragraphs 8.5.1(c) and 9.6.1(f). Either of the proposed grading methods is permissible depending on the needs of the employer. Other approaches may also be taken. The approach which meets the needs of the employer should be described in his written practice and followed for the practical examination. The last technique proposing a questionnaire for which written answers would be prepared would fall more appropriately under the Specific examination category.

Inquiry 80-3

A candidate spends 50 percent of his time performing radiography, 25 percent performing magnetic particle examinations and the remaining 25 percent performing liquid penetrant examinations. At the end of a one-month period, assuming a 144-hour month, is Method A or Method B a correct computation of working time experience for certification to a Level I rating?

Method A: The candidate claims work time experience of 144 hours for each of the three methods.

Method B: The candidate claims work time experience of 72, 36 and 36 hours for radiography, magnetic particle and liquid penetrant, respectively.

Response

These questions have been addressed in Inquiries 76-1, 76-2 and 78-3, which were published above and in *Materials Evaluation* in October 1977 and October 1978. As further clarification, the method described in Method A is that intended by the document. In other words, the examiner may claim full-time for all the NDT methods in which he works simultaneously. It is not intended he claim time for work hours spent in work other than nondestructive testing.

Inquiry 80-4

NDT examiners in our employ who perform examinations using liquid penetrant use only the visible dye, solvent removable, penetrant technique. Since our examiners do not have need to be qualified in the other liquid penetrant techniques, is it permissible to modify the number of general and specific questions as well as the hours of training and work experience to satisfy requirements of *SNT-TC-1A* for Level I and Level II examiners?

Response

Please refer to Inquiry 76-2, published above and in *Materials Evaluation* in October 1977 and Inquiry 77-13 published above and in *Materials Evaluation* in October 1978. It is the intent that *SNT-TC-1A* is a recommended practice and that it is a guideline which should be modified by the employer as necessary to meet his particular needs. The employer should determine his needs, determine the necessary qualifications of his examiners to meet those needs and describe those in his written practice.

Inquiry 80-6

1. How may we qualify supervisory personnel in accordance with *SNT-TC-1A*? Supervisory personnel would include quality control engineers in plants doing surveillance-type inspection.
2. Table 6.2.1A for *SNT-TC-1A* provides: "credit for experience may be gained simultaneously in two or more disciplines. The candidate must spend at least 25 percent of this work time on each discipline for which experience is being claimed." Does this statement mean (as it regards Level I PT) that if the candidate is already a qualified Level I or Level II radiographer, the one month work experience can be reduced to 44 hours?

Response

1. This inquiry is similar to Inquiry 76-4 which was answered above and in the October 1978 issue of *Materials Evaluation*. It must again be emphasized that *SNT-TC-1A* is a guideline to aid an employer in certifying his employees and the guidelines combined in that document should be modified to meet the employer needs.
2. It is the intent of this statement that a candidate may take credit for work performed in two methods simultaneously because of the knowledge interchange factor believed to be present in such activities. It is not intended that an examiner certified in one method could at some later time reduce the requirements for certification in another method except as defined in the employer's written practice.

Inquiry 80-7

In the NDT Level II practical examination, 8.5.2(c), is it intended that the NDT Level II candidate demonstrate proficiency in all phases of the NDT operation (i.e., set up, calibration, inspection and interpretation)?

Response

Yes, it is intended that the Level II demonstrate proficiency in all phases of the operation for which the candidate is being certified. The employer's written practice should define the duties and needed knowledge.

Inquiry 80-8

1. May an employer deviate from the guidelines to meet his specific needs?
2. Is our company's specific written practice acceptable?

Response

1. Yes, in accordance with Paragraph 1.4 of *SNT-TC-1A*, the employer should modify the guidelines to meet his needs.
2. It is against ASNT policy to judge the applicability of company documents. As a general comment, it is the employer's prerogative to establish his criteria for certification. It is then his customer's prerogative to accept or reject those criteria.

Inquiry 80-9

Is there an acceptable method by which a Level III may be certified by a new employer on the basis of Level III certification examinations administered by the former employer without examination?

Response

As outlined in Paragraph 8.5.4, an employer may waive examination for an NDT Level III based on the candidate's demonstrated and documented ability, achievement, experience and education as defined in Paragraph 4.3(c) and 6.3. However, if the new employer desires that the certification be based on examination, then the employer must reexamine the candidate or obtain copies of the examinations taken by the candidate at the previous employer. This step is necessary to ensure the quality of the examination and to meet the documentation needs of Paragraph 9.6.1(f).

Inquiry 80-12

1. If a candidate does not spend 25 percent of his time in the method in a given period, e.g., one month, can he accumulate one month's credit over a longer period, e.g., two months and claim one month's experience?
2. What constitutes an NDT-related activity that may be identified in the employer's written practice? What percentage of time may be NDT related?
3. Can work experience prior to and in excess of the Level I requirements be applied to Level II experience requirements?
4. May documented experience at a level equivalent to NDT Level II in a company without a certification program be used by a new employer to fulfill experience requirements for Level II?

Response

1. No, the intent of the note to Table 6.2.1A (6.3.1) is that work time experience claimed for a specific period should be accumulated in that period. For example, to claim one month work time experience, the candidate should spend at least 44 hours (one fourth of 175) in the method and the remaining work time (75 percent) of that month in NDT-related activities.
2. As stated in the note to Table 6.3.1 (1980 edition), the employer should

define NDT-related activities. It is also intended that all work time experience claimed should be in NDT or its related activities.

3. Note (1) to Table 6.3.1 (1980 edition) and Table 6.2.1A (1975 edition) indicate that the total NDT experience of the candidate may be applied to the requirements for Level II.
4. Yes, provided the experience is documented to the requirements of the new employer's written practice and the candidate passes the necessary examinations.

General Comments

Please note that experience required for Level II includes work at both trainee and Level I levels. Work experience claimed for Level II should meet the experience required at these levels.

Inquiry 80-14

There are certain differences in the 1975 and 1980 editions of *SNT-TC-1A*. Is it the intent that individuals qualified to the 1975 edition be certified as qualified to the 1980 edition without reexamination (where examinations have been used as the basis for qualification) when an organization chooses to upgrade their written practice to the 1980 edition?

Response

Yes, it is the intent that individuals certified to the 1975 edition, whether by examination or by waiver in accordance with Paragraph 8.5.4 (1975 edition), are automatically certified to the 1980 edition when the employer chooses to upgrade his written practice to the 1980 edition. Subsequent recertifications should be to the guidelines of the later edition.

Inquiry 80-15

What is the definition of "annual" as used in *SNT-TC-1A* (1980 edition), Paragraph 8.1.1(4), "The examination should be administered on an annual basis"?

Response

The intent of this statement is that the examination should be administered every year with the interval between examinations not to exceed 12 months from the month of the examination.

Inquiry 81-1

Is it the intent of Paragraph 8.2(a2) that individuals demonstrate the

capability of distinguishing and differentiating contrast between colors on an annual basis or only upon certification and/or recertification?

Response

The individual should demonstrate this capability upon original certification and upon recertification by practical examination or work performance. Normally, recertification occurs at three-year intervals.

Inquiry 81-3

The ASNT examinations for Level III are referred to as "General" and "Practical." In the 1980 edition, these are "Basic" and "Method." May I assume this is a change in terminology and that the examinations are equivalent?

Response

The ASNT Level III examinations are titled "Basic" and "Method" as are the designated examinations in *SNT-TC-1A* (1980 edition). It is intended that the ASNT Level III examinations satisfy the "General" and "Practical" examinations of *SNT-TC-1A* (1975 edition).

Inquiry 81-5

Do the requirements identified in Table 6.2.1A (1975 edition) include (a) required performance of the test method by personnel for certification or (b) personnel are to be employed where the test method is being utilized?

Response

The intent of *SNT-TC-1A* is clear. Actual performance of work in the method is required for that time to be claimed as work experience.

Inquiry 81-9

1. May the president of an NDT company appoint himself as a Level III provided he is qualified?
2. May a Level III qualify NDT personnel for another company?

Response

1. An employer may certify any employee as Level III provided the individual has the qualifications required by the employer's written practice.
2. Yes, he may attest to the qualifications of an individual in another company. However, the individual must be certified by his

own employer, not the aforementioned Level III.

Inquiry 81-12

Paragraph 9.6.1(f) (1975 edition) states that qualification records should include "copies of current examinations and of grades for all previous examinations and ..." Does the phrase "grades for all previous examinations" imply grades for examinations by the present employer and/or previous employers and outside agencies?

Response

Paragraph 9.6.1(f) (1975 edition) applies to examinations administered by the present employer.

Inquiry 81-13

Does on-the-job training in lieu of classroom training satisfy the requirement for organized training?

Response

Paragraph 7.1 (1980 edition) states that the personnel "should complete sufficient organized training to become thoroughly familiar with the principles and practices of the specified test method ..." It is intended that the training be organized into a definite training program although the form of that training is not specified.

Inquiry 81-15

Paragraph 8.1.1.2 states, "The examination should demonstrate the capability of distinguishing and differentiating contrast between colors used in the method." Does the Ishihara color chart satisfy this requirement?

Response

Any means used to determine the individual's capabilities of color differentiation and distinguishing: (1) which actually accomplishes the determination and (2) which is satisfactory to the employer and its customer should fulfill this requirement.

Inquiry 81-16

Is it the intent of *SNT-TC-1A* that employers may prorate classroom training hour requirements for personnel with an education level between the educational levels defined in the document?