

ACCREDITATION SCHEME OF NONDESTRUCTIVE TESTING SERVICE
COMPANIES IN THE PHILIPPINES
BY

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I. INTRODUCTION

Last November 14, 2003, during the 18th Annual Convention of the PHILIPPINE SOCIETY FOR NONDESTRUCTIVE TESTING, INC. (PSNT), a proposed accreditation scheme for NDT service companies was presented to the members of the PSNT. The general idea of having voluntary accreditation was approved by the members.

Accreditation in the country is popular among schools where competition is strong. To gain more enrollees, schools, colleges and or universities, both public and private are applying for accreditation. Accreditation is still unacceptable to NDT companies, probably because it entails a lot of work and money.

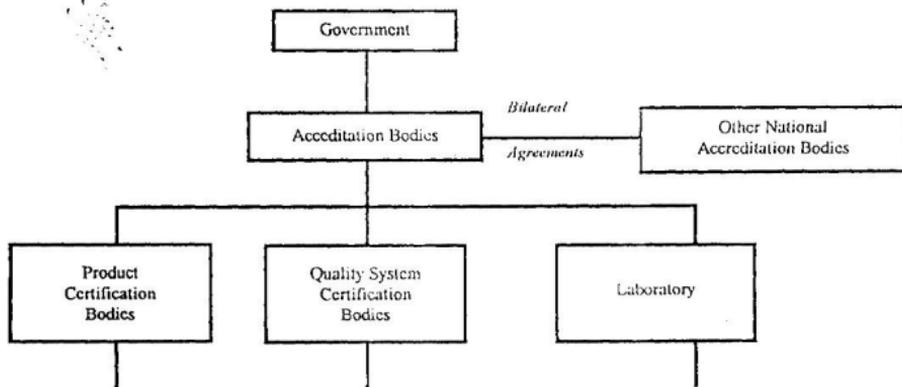
Accreditation is a process that generally applies to individuals or organizations and involves elements of conformance to standards, competency judgment; the evaluation of credentials expertise and professionalism and "formal" recognition.

When an organization certifies that a product or practice conforms to a particular specification customers and the community at large have the right to seek an assurance as to the competence of the certification agency. The credibility of the agency's certification is critically dependent on the agency's own skills, expertise and professionalism. In order to provide confidence in the work of a certification body it needs some form of formal recognition. It needs accreditation!

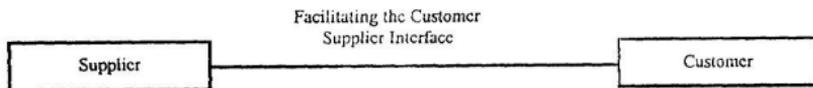
In this context, therefore, accreditation is the term that applies to the assessment evaluation and formal recognition of the work of certification bodies.

Laboratories, can be conformity certification bodies. Product certification (standards) bodies and quality management system certification bodies are subject to certification.

The relationship between certification and accreditation bodies in the Philippines is shown below.



CONFORMITY CERTIFICATION MECHANISMS



It is the job of these national accreditation bodies to ensure that certification bodies comply with relevant standards and to ensure that they have the necessary technical competence to perform their work.

When the certification body is a laboratory then its accreditation must include an evaluation of the scientific expertise of the laboratory staff. When considering the accreditation of a quality system certification body the assessment process must take into account the technical competence of its auditors.

2. ACCREDITATION FOR NDT LABORATORIES

The field of nondestructive testing covers examination of materials, components and assemblies by means of nondestructive methods at field sites, construction sites, workshops and in laboratories. It includes examination for the assessment of material quality and condition, and examination to determine internal construction and

dimensions. Therefore, accreditation will confirm the technical competence and quality system implementation of these laboratories.

3. ACCREDITATION SCHEME

An "Implementing Guidelines for the Accreditation of Nondestructive Testing (NDT) Service Companies" has been developed by the Bureau of Product Standards, Department of Trade and Industry. This will be presented to the industry for approval and will form a part of this accreditation scheme.

The accreditation scheme consists of two phases. The first phase is an accreditation to be done by PSNT and is hereby termed as PSNT Accreditation. This is a scaled-down version of the accreditation to be done in the second phase. The guidelines to be developed here and the experience to be gained will be inputted to the second phase. The suggested guidelines are presented in this paper.

The second phase is the accreditation to be done by the national body under the aegis of the Bureau of Product Standards and is hereby termed as National Accreditation.

4. PSNT ACCREDITATION

4.1 Scope

4.1.1 The guidelines to be developed here are aimed at evaluating the capability of a NDT service company to properly perform designated NDT techniques/examinations.

4.1.2 Criteria are to be developed to establish essential characteristics pertaining to the organization, personnel, facilities, and quality systems of the service company.

4.1.3 A framework for implementation of the accreditation process is presented.

4.2 Applicable Documents

4.2.1 The following documents and/or standards are referenced in the formulation of the guidelines for the accreditation process: ISO 9001, 9002, and 9003; ASTM E-543, 1212, 1359, and PNS146:1998.

4.2.2 For purposes of the PSNT Accreditation the above-cited applicable documents may or may not be strictly adhered to, except for PNS146:1998, "Qualification and Certification of Nondestructive Testing Personnel", which is to be fully implemented.

4.2.3 The above-cited applicable documents may be supplemented by other documents which are found to be relevant and applicable during the course of the formulation of detailed guidelines and evaluation criteria.

4.3 Evaluation Criteria

The criteria which are presented herein, serve only as initial factors for evaluation. They maybe supplemented by additional factors which would be determined and found relevant by the PSNT Accreditation Committee to make a detailed draft of these criteria.

4.3.1 Organization of the NDT Service Company

Relevant data and information regarding the NDT service company shall be provided by proper documentation. The data and information will include as minimum, items like:

- a. Complete legal name and address;
- b. Names and positions of the principal officers and directors;
- c. The company's ownership, managerial structure, and principal members;
- d. Functional description of the company's organization structure, operations group, and support group;
- e. A general description of the company's client's; and
- f. A listing of the relevant technical services offered.

4.3.2 Personnel Qualification and Human Resources

- a. Training, qualification, and certification of the nondestructive testing personnel shall be in accordance with the National Standard PNS 146:1998.
- b. There shall be maintained personnel records of the certified NDT personnel, containing, among others, his/her documented certification, work experience, and training history.
- c. The service company shall describe the program or means of ensuring the continued competence of its personnel to perform NDT.

4.3.3 Facilities for Nondestructive Testing

- a. The service company shall be equipped with, or have access to, the minimum required equipment and number for the service it is to perform (This minimum requirement will be established by the PSNT Accreditation Committee).
- b. Equipment leasing from and by PSNT-accredited company may (or may not) be allowed.
- c. The service company shall ensure that its equipment used in NDT are calibrated and properly maintained.

4.3.4 Quality Systems

- a. As a minimum requirement, a Procedures Manual for the type of work for which the NDT service company is being accredited shall be prepared.
- b. The NDT service company shall ensure that it performs only examinations for which it is adequately equipped and staffed.
- c. The NDT service company shall ensure that only certified NDT personnel are to perform the NDT examinations and only calibrated equipment are to be used in the NDT work.

- d. The NDT service company shall ensure that NDT activities are done in accordance with specified standards or quality control criteria or both.
- e. There shall be established control of purchased NDT equipment, supplies and services, including handling, storage and shipping or transport, as applicable.
- f. A Level 3 personnel within the company to be responsible for maintaining the company's quality system shall be designated.
- g. The NDT service company shall develop a Quality Manual.

4.3.5 Implementation

- a. The PSNT represented by its Board of Directors, shall create working committees to make a detailed draft of the guidelines for accreditation and to develop the survey questionnaires.
- b. The PSNT shall create a PSNT Accreditation Committee (PSNT-AC) to conduct the assessment of the NDT service companies.
- c. The PSNT shall create the PSNT Assessment Teams (PSNT-AT) to conduct the assessment of the NDT service companies.
- d. The accreditation shall have a fixed validity period.
- e. Surveillance shall be undertaken by the PSNT-AT during the validity of the accreditation.
- f. Initially, a self-survey by the NDT service companies based on the survey questionnaires to be developed by the PSNT working committees would be recommended.

5. NATIONAL ACCREDITATION

5.1 Proposed Framework

5.1.1 The "Implementing Guidelines for the Accreditation of Nondestructive Testing (NDT) Service Companies" as developed by the Bureau of Product Standards herein referred to as the "ARTICLE" is proposed as the framework for national accreditation. A copy of the "ARTICLE" is attached to this paper.

5.1.3 Items in the "ARTICLE" which could be modified, supplemented, or detailed could be:

- a. Item 4.0 – Classification of NDT Service Companies;
- b. Item 7.1 – Rules and Regulations; and
- c. Item 8.0 – Requirements for Accreditation

5.2 NDT Assessment Teams

5.2.1 The PSNT Accreditation Committee shall establish and cause the publication of the:

- a. guidelines or qualification and selection of assessors;
- b. the conduct of the on-site assessments;
- c. the implementation of proficiency testing, as needed;
- d. the evaluation of companies leading to accreditation;
- e. the accreditation criteria;

- f. the evaluation procedures; and
- g. associated fees, if any.

5.3 Importance of the PSNT Accreditation

5.3.1 The Evaluation Criteria, implementing guidelines, and experience gained in the implementation of the PSNT Accreditation will substantially contribute to the development and implementation of the National Accreditation.

5.3.2 The PSNT Accreditation will cease once the national certification is fully implemented.

6. CONCLUSION

The Philippines cannot be isolated in the conduct of NDT techniques and examinations and assuring the quality of the work, services, and other related activities in NDT because of globalization. Competition among countries to prove their worth is a healthy endeavor and must be proven by tangible results. Clients of NDT need to be satisfied with quality performance of the NDT service companies and performed by qualified and certified NDT personnel.

The accreditation of local NDT service companies and providers will provide the proofs of the competitive qualities of the Filipino NDT practitioners. This will show the proof that the NDT sector is governed by appropriate regulations. The accreditation will also serve as a deterrent measure in the coming of foreign NDT contractors as they are to be subjected to the accreditation scheme implemented in the Philippines before they are allowed to perform NDT jobs in the country.

IMPLEMENTING GUIDELINES FOR THE ACCREDITATION OF NONDESTRUCTIVE TESTING (NDT) SERVICE COMPANIES

by

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Introduction

Pursuant to the Department of Science and Technology (DOST), the Department of Trade and Industry (DTI), and the Philippine Society for Nondestructive Testing (PSNT) joint efforts to professionalize the practice of Nondestructive Testing (NDT) in the country, the following guidelines are hereby promulgated for the guidance and compliance of all concerned.

1.0 Objectives

To assist in the professionalization of the practice of Nondestructive Testing (NDT) in the country by instituting the mechanism of the accreditation program for which the NDT service companies are properly classified as to their capability to provide services according to the quality requirements of the standard.

2.0 Scope

These guidelines prescribe the rules and regulations relative to the accreditation of the NDT service companies.

3.0 Definition of Terms

- 3.1 **Certification** — the process of attesting to the capability and proficiency of the person to practice Nondestructive Testing (NDT).
- 3.2 **NDT (Non Destructive Testing)** — testing to detect internal and concealed defects in materials using techniques that do not damage or destroy the items being tested.
- 3.3 **NDT Equipment** — equipment, machines, set of tools, kits, chemicals used in the pursuance of an NDT technique or method.
- 3.4 **NDT Practitioner** — a person by virtue of his knowledge and expertise in the different techniques of NDT have been qualified and certified by the appropriate national certifying body to be engaged in the practice of NDT.

3.5 **NDT Service Companies** — companies, firms, or corporations registered with the Securities & Exchange Commission and the Department of Trade and Industry engaged in the practice of NDT in the country.

3.6 **NDT Techniques** — techniques, process, method, or system that is used in determining flaws or defects of solid materials. Examples are: Radiographic Testing (RT), Ultrasonics Testing (UT), Magnetic Particle Testing (MT), Liquid Penetrant Testing (PT), Eddy Current Testing (ET).

3.7 **NDT Training** — process of educating and teaching personnel in the rudiments of the various techniques in NDT.

3.8 **Qualification** — the process of ensuring the proficiency of a NDT personnel through a series of records verification of training, education, and experience and the results of the tests to be administered.

4.0 Classification of NDT Service Companies

- 4.1 **Class 'AA'** — has the capability to render all NDT techniques and has the required number of qualified and certified NDT personnel and NDT equipment.
- 4.2 **Class 'A'** — has the capability to render two or three NDT techniques with the required number of qualified and certified NDT personnel for the technique(s) and appropriate NDT equipment.
- 4.3 **Class 'B'** — has the capability to render one NDT technique with the required number of qualified and certified NDT personnel for the technique and appropriate NDT equipment.

5.0 Organization of the Nondestructive Testing Accreditation Board (NTAB)

The Nondestructive Testing Accreditation Board (NTAB) shall be composed of the Directors of the Philippine Nuclear Research Institute, DOST (PNRI-DOST), Bureau of

Product Standards, DTI (BPS-DTI), and three (3) representative of the Philippine Society for Nondestructive Testing (PSNT). The Director, BPS, DTI shall be the Chairman of the Board.

6.0 Organization of the Nondestructive Testing Assessment Teams

There shall be organized Nondestructive Testing Assessment Teams (NDTAT) who shall be appointed by the NDTAB to conduct the assessment of the NDT service companies. It shall be composed of two (2) representatives each from PNRI-DOST, BPS-DTI and the PSNT.

7.0 Powers and Duties of the NDT Accreditation Board

- 7.1 Formulates rules and regulations pertaining to the accreditation of NDT service companies.
- 7.2 Forms and assigns Assessment Teams to conduct assessment and spot inspection of the facilities of the NDT service companies.
- 7.3 Reviews and evaluates the reports of the Assessment teams as to its compliance to these guidelines.
- 7.4 Recommends the issuance, renewal, suspension, and cancellation of the certificate of accreditation to the BPS-DTI.
- 7.5 Implements the terms and conditions of the certificate of accreditation.
- 7.6 Collects appropriate accreditation fees payable to the NDTAB.
- 7.7 Requires the production of documents, papers, invoices, inventory records, etc. to determine the compliance of the accredited NDT service companies based on established rules and regulations relative to the requirements of these guidelines.

8.0 Requirements for Accreditation

- 8.1 NDT service companies shall be assessed based on PNS-147:1987, PNS/ISO 9001, PNS/ISO 9002, and PNS/ISO 9003 Quality Management System whichever is applicable.

8.2 Equipment Requirements

- 8.2.1 Equipment and materials used for particular NDT technique shall be available in minimum number (at least one equipment and materials per NDT technique shall be available).
- 8.2.2 Equipment leasing is not allowed even from an

accredited NDT service company.

8.3 Requirements for NDT Staff

- 8.3.1 Only qualified and certified NDT personnel for the NDT technique and level shall be employed to conduct the NDT technique.
- 8.3.2 Each NDT service company shall have a Level 3 personnel for each of the NDT technique.

9.0 Application for Certificate of Accreditation

- 9.1 The application for the certificate of accreditation shall be made on BPS Form No. 8 obtainable free of charge from the BPS, DTI.
- 9.2 The application shall be duly subscribed and sworn to by the applicant and shall include an undertaking of the applicant that he is binding himself to abide by and comply with the terms and conditions of certificate that may be issued in his favor.
- 9.3 The completed application form together with corresponding fees shall be submitted to the NDTAB Secretariat for the proper documentation and endorsement to the Chairman, NDTAB for appropriate action.
- 9.4 The NDTAB through its Chairman shall act on the application form and send the NDTAT to conduct and assess the applicant's facilities and equipment in accordance with the accreditation rules and regulations.
- 9.5 The NDTAT shall recommend the proper actions to be undertaken on the application and if favorable, the Chairman of the NDTAB shall issue the corresponding Certificate of Accreditation subject to the rules and regulations, and terms and conditions of NDT service company accreditation.
- 9.6 In case the application is denied, the applicant shall file a request for reconsideration submitting supporting papers needed. Such letter of reconsideration shall be filed within fifteen (15) days from receipt of the denial letter from the NDTAB.
- 9.7 In case of renewal, the same procedure as 9.5 shall be followed by the applicant.

10.0 Terms and conditions of the Certificate of Accreditation

- 10.1A certificate granted under these guidelines shall take effect from the date of issue and shall be in full force and effect within three (3) years unless sooner

amended, revoked, or canceled for cause.

- 10.2 A certificate issued under these guidelines is non-transferable.
- 10.3 A certificate issued under these guidelines shall contain the terms and conditions for which the certificate holder is expected to abide at all times during the certificate's effectivity.
- 10.4 The terms and conditions imposed on the certificate shall be binding on the certificate holder. Any infraction thereof shall constitute sufficient grounds for the institution of cancellation proceedings against the accredited NDT service companies.
- 10.5 The accredited NDT service company shall permit and grant duly authorized NDT Assessment Teams (NDTAT) free access to its plant premises, facilities, equipment, records and other materials as may be necessary for the conduct of the periodic inspections at anytime within the regular company time, during the lifetime of the certificate.
- 10.6 The accredited NDT service company shall at all times comply with the requirements of the accreditation.

11.0 Cancellation, Revocation, Amendment, Re-classification of the Certificate

- 11.1 Any certificate granted under the provisions of these guidelines may be canceled, revoked, or amended or re-classified as the case may be, on any or all of the following grounds:
- 11.1.1 The NDT service company have willfully submitted material false statements and documents in connection with its application for the grant of the accreditation certificate.
- 11.1.2 The NDT service company fails to meet the minimum requirements as prescribed in these guidelines.
- 11.1.3 The NDT service company fails to comply with any or all of the terms and conditions of the certificate.
- 11.2 No accreditation certificate shall be canceled, revoked, amended, or re-classified until after the Chairman, NDTAB shall have serve notice to the concerned NDT service company stating therein the grounds for the contemplated actions for the cancellation, revocation, amendment, or re-classi-

fication of the certificate.

- 11.3 The accredited NDT service company is given fifteen (15) days from receipt of the notice to submit in writing their response to the notice.
- 11.4 The NDTAB shall set the date of the hearing where the concerned NDT service company is given the chance to explain its position regarding the proposed cancellation, revocation, amendment, or re-classification of the certificate.
- 11.5 The concerned NDT service company shall have the opportunity to re-apply for the certification five (5) years after such certificate have been canceled or revoked.

12.0 Periodic Assessment

Duly authorized NDT Assessment Teams shall visit and conduct assessment of the accredited NDT service company's facilities, premises, equipment, records, and other materials periodically (once-per-year, as a minimum) but at the discretion for the NDTAB to determine that the terms and conditions of the certificate are being observed and complied with by the certificate holder.

13.0 Confidentiality

Any information, data, or other records obtained by the NDTAB, NDTAT, PNRI-DOST, and BPS-DTI arising from or in connection with the application for accreditation or during the periodical assessment/evaluation of the NDT service company shall be treated with confidentiality and shall not be divulged except upon orders of the courts of competent jurisdiction.

14.0 Effectivity

These guidelines shall take effect upon approval of the BPS-DTI and PNRI-DOST on recommendations of the NDT industry sector.

Additional Corporate Member:

PETRON CORP., Refining Division
Limay, Bataan Tel 856930/39

Additional New Individual Members:

ROSALINO B. REJAS
ARLEAN L. ALAMARES
c/o PNRI

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ANTONIO B. MONTECLARO
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