

Chapter 17. Qualification of Nondestructive Testing Personnel

Qualification of personnel is one of the most important aspects of nondestructive testing. As in welding, qualification assures that the person performing the test method has proper knowledge and experience to apply the test and interpret the results. Most nondestructive testing personnel are qualified in accordance with the American Society for Nondestructive Testing Recommended Practice No. SNT-TC-1A. This document establishes guidelines for education, training, experience, and testing requirements for various levels of competence. The levels and the functions that can be performed by each level are as follows:

(1) NDT Level I. An NDT Level I individual shall be qualified to properly perform specific calibrations, specific tests, and specific evaluations according to written instructions and to record the results. He shall receive the necessary guidance or supervision from a certified NDT Level II or III individual.

(2) NDT Level II. An NDT Level II individual shall be qualified to set up and calibrate equipment and to interpret and evaluate results with respect to applicable codes, standards, and specifications. He shall be thoroughly familiar with the scope and limitations of the method and shall exercise assigned responsibility for on-the-job training and guidance of trainees and NDT Level I personnel. He shall be able to prepare written instructions and to organize and report nondestructive testing investigations.

(3) NDT Level III. An NDT Level III individual shall be capable of and responsible for establishing techniques; interpreting codes, standards, and specifications; and designating

the particular test method and technique to be used. He shall be responsible for the complete NDT operation he is qualified for and assigned to, and shall be capable of evaluating results in terms of existing codes, standards, and specifications. He shall have sufficient practical background in applicable materials, fabrication, or product technology or both to establish techniques and to assist the design engineer in establishing acceptance criteria where none are otherwise available. It is desirable that he have general familiarity with other commonly used NDT methods. He shall be responsible for the training and examination of NDT Level I and Level II personnel for certification. The actual administration of training and grading of examinations may be delegated to a duly selected representative of the Level III individual and so recorded.

Although the qualifications of nondestructive testing personnel can be determined by testing, the day-to-day performance of the personnel is quite difficult to evaluate. This difficulty is due to the fact that, with the exception of radiography, the only knowledge of how the test was performed and how the results were evaluated is recorded by the operator. Thus, unless the welding inspector observes performance of the test and participates in evaluation of the results, the welding inspector must trust the qualification and integrity of the nondestructive testing operator. The exception to this, radiography, produces a film record that can be evaluated by the welding inspector. A skilled film reviewer can determine, to a great extent, the conditions associated with making the film and can independently evaluate the film image.