

NONDESTRUCTIVE EXAMINATION FOR ENGINEERS AND MANAGERS, PROVIDED BY STRUCTURAL INTEGRITY ASSOCIATES

CLASSROOM INSTRUCTORS

Larry Nottingham

(B.S. Mechanical Engineering, University of Pittsburgh) has over 40 years of experience in NDE and condition assessment of a wide variety of power plant equipment and components. He has extensive experience in the development and delivery of advanced NDE systems and procedures for numerous power plant applications, both fossil and nuclear.

Owen Malinowski

(M.S. Engineering Mechanics and B.S. Engineering Science, Pennsylvania State University) is in the Research, Development, & Integration Group at Structural Integrity Associates, Inc. He is an expert in the theory and practice of bulk wave ultrasonic, guided wave ultrasonic, and electromagnetic NDE. (See page 3 for highlights of information related to their Accreditations/Industry Leadership).

CONTACT INFORMATION

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INTENDED AUDIENCE

1. Engineers and managers who seek a better understanding of modern methods for NDE of pressure vessels and piping as well as strategies for effective use of NDE results.
2. This course may be of special interest to those involved with integrity management, buried piping programs, in-service inspections, aging management programs, ILI verification assessments, road crossing examinations, External Corrosion Direct Assessment (ECDA) and Internal Corrosion Direct Assessment (ICDA).



TYPE

Classroom Training



DURATION

Three days (22 PDH)

LEARNING OBJECTIVES

Nondestructive examination (NDE) is an important tool for aging management of plant components.

In this course, NDE methods are reviewed on an industry-specific basis and a general introduction and review of the most common NDE methods is presented. A more focused review of frequently used NDE technologies and techniques is provided, including multiple hands-on technology demonstrations. Structural Health Monitoring (SHM) concepts and technologies are also reviewed. A general process for matching inspection needs with NDE methods, technologies, and techniques is also provided. Participants will learn basic quality control measures, recommended reporting requirements, planning and strategies for the effective utilization of NDE results.

Nondestructive Evaluation (NDE) is utilized throughout the energy industry to assess the condition of critical components. An understanding of NDE principles, as well as their capabilities and limitations, is paramount to making engineering decisions based on NDE data.

This course is unique because it will enable engineers to understand the bases for appropriate NDE technology selection as well as the capabilities and limitations of each NDE technology. Additionally, attendees will learn NDE terminology and the basics of data analysis and interpretation, facilitating informed and intelligent engineering decisions based on NDE data.

Topics Covered:

- Process Technology
- Intro to NDE Methods
- NDE Method Selection
- NDE Personnel, Codes, & Standards
- Planning NDE Activities
- NDE Reporting
- SHM vs. NDE

KEY INDUSTRY DOCUMENTS

EPRI Reports written by George Licina

1. [List of key industry documents discussed in the course including regulations, standards, technical reports, Operating Experience reports, etc.]
2. ASME B&PV Code:
 - I. General on various sections
 - II. Sections XI, V
 - III. Section XI, Appendix VIII - PDI
3. ASNT SNT-TC-1A
4. ASM, ASTM Codes and Standards
5. NIST
6. CFR Part 21

OTHER RELATED INFORMATION

Larry Nottingham

- Accreditations/Industry Leadership:
 - Level III NDE Certifications in Ultrasonics, Liquid Dye Penetrant and Magnetic Particle Testing methods
 - Published more than 70 technical papers, reports and articles and has been a presenter at numerous conferences, workshops, and seminars on NDE, including being a guest lecturer at the United States Naval Academy

Owen Malinowski

- Accreditations/Industry Leadership:
 - ASME Co-inventor and co-developer of Structural Integrity's SIPECT™, a dynamic Pulsed Eddy Current NDE technology
 - Authored journal publications and patents