

WELDING & MATERIALS, PROVIDED BY STRUCTURAL INTEGRITY ASSOCIATES

CLASSROOM INSTRUCTORS

Dr. Richard Smith

(Ph.D. Materials Engineering Science and M.S. and B.S. Metallurgical Engineering, Virginia Polytechnic Institute) has a rich 50-year career with focus on electric power industry issues involving metallurgy, corrosion, and welding. He has worked with utility and industrial clients on materials selection and design, welding and welded repairs, corrosion, root cause evaluations, licensing support, and training.

David Segletes

(B.S. Metallurgical Engineering, Illinois Institute of Technology) has 24 years of experience in failure investigations, manufacturing, and rotor weld repair technology in the power generation industry. He recently joined Structural Integrity Associates and has been dedicated to the development of training based on his expertise in metallurgy and fabrication. (see p.3 for highlights of information related to their Accreditations/Industry Leadership).

CONTACT INFORMATION

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INTENDED AUDIENCE

Design engineers, program engineers, component engineers, maintenance engineers, system engineers and regulators who desire a practical knowledge of welding processes, welding metallurgy and associated heat treatments, and best industry practices.



TYPE

Classroom Training



DURATION

Two days (15 DH)

LEARNING OBJECTIVES

Welding is integral to construction, maintenance, and repair of power plants and components. Nuclear plants are required by federal law to control special processes such as welding and nuclear welding programs are the cornerstone for compliance with this requirement. The interaction among various organizations at nuclear facilities is necessary to plan, implement, and inspect welding activities. A fundamental knowledge of welding processes and welding programs is essential for individuals interacting with welding activities to ensure first time quality is achieved. Further, a broader understanding of welding will increase effective communication among site welding and non-welding personnel.

This course provides an in-depth review of welding at nuclear power plants, including welding process fundamentals, materials and metallurgy, and relevant Codes and Standards.

Appropriate weld design, welding procedures, and welder qualification are vitally important in the energy industry. Structural Integrity offers comprehensive welding engineering services, including development and review of welding programs, selection and development of welding processes for critical applications, review and evaluation of procedure qualification records, and review and evaluation of weld failures. Our instructors bring many years of experience and practical applications that incorporate industry best practices to this class.

Topics Covered:

- Welding Codes and Standards
- How welding processes are qualified and controlled
- Fundamentals of various welding processes
- Common welding problems
- Weld joint configurations
- Welding materials and metallurgy
- Heat treatment
- Temper bead welding
- Weld Overlay repairs

KEY INDUSTRY DOCUMENTS

1. ASME Boiler and Pressure Vessel Code, Section II
2. ASME Boiler and Pressure Vessel Code, Section IX
3. ASME Boiler and Pressure Vessel Code, Section XI
4. EPRI Welding and Repair Technology Center

OTHER RELATED INFORMATION

Dr. Richard Smith

- Accreditations/Industry Leadership:
 - American Welding Society Fellow
 - ASME Section XI Working Group member and ad hoc member on welding repairs and special processes
 - ASME Section IX Task Group presenter

David Segletes

- Accreditations/Industry Leadership:
 - ASME Section XI Working Group Welding and Special Repairs Processes