

Summary Curriculum Vitae - DENIS E. CLARK, P.E. – 12 January 2019

D. E. Clark has been involved in welding research and development for over 40 years. He has worked in the areas of weldability, materials testing, experimental equipment design and construction, thermal modeling and simulation, the control of welding and other processes, and welding safety and health.

EMPLOYMENT/EDUCATION

Professional Engineer, Idaho License # 15775

AWS Certified Welding Inspector, CWI Certificate #13052201

February 2013-present: Consultant: Principal Engineer, DEClark Welding Engineering, PLLC

August 2013-2018: Adjunct Professor, General Engineering, Montana Tech University

1983-2013: Idaho National Laboratory, Energy Efficiency and Industrial Technologies Department. Technical activities and topics include: diffusion welding processes for Ni-based alloys for heat exchanger applications; metallurgy and weldability of neutron absorber materials for waste storage structural elements; remote welding procedures and techniques for waste closure packages, Yucca Mountain Project and National Spent Nuclear Fuel Program; fundamental experimental studies in friction stir welding (FSW); advanced control systems for seamless steel tube mills; intelligent control of the cupola furnace via neural networks and hybrid fuzzy logic/neural network controllers; automotive industry CRADA for advanced in-plant diagnostics and control of welding processes using self-contained diagnostic systems; development and implementation of thickness and cooling rate sensing and control for the spray forming of steel; fundamental experimental studies of droplet transfer physics and mode detection in gas metal arc welding; modified GMAW welding process for the direct deposition of metal-matrix composites; INL Gleeble operation, including uniaxial, torsion, and Hydra-wedge units; weldability of rapidly solidified materials; INL in-house consulting on welding problems, qualification, and ASME code issues, including training in BPV Sec III Div 1. DOE "Q" clearance.

1980-83 The Ohio State University, Columbus, Ohio: **MS, Welding Engineering**. Thesis: Weld Pool Synthesis of Filler Materials for HY-130 Steel, advisor Prof. David Howden. Taught undergraduate labs.

1979-80 Travel in South America.

1976-79 Sandia Laboratories, Livermore, California: Engineering and Science Assistant, Materials Characterization Division. Responsible for design and operation of experimental apparatus, weldability testing, vacuum heat treating.

1974-76 College of San Mateo, San Mateo, California: **Certificate, Welding Technology**. Teaching Assistant in gas tungsten-arc welding course.

1974 Cornell University, Ithaca, New York: **BS, Agricultural Science**. Coursework in agronomy, agricultural engineering, biological sciences.

1972 Union Carbide Corporation, Pine Creek Operations, Bishop, California: Laborer in tungsten mine and mill, summer employment.

1969-72 Deep Springs College, Deep Springs, California (non-degree granting): course work in the liberal arts.

PROFESSIONAL/TEACHING

51 technical publications, 6 US Patents

Developed additive manufacturing undergraduate curriculum, Montana Tech University, 2016.

On-line teaching, welding engineering program, Montana Tech University, Fall 2013, 2014, 2015, 2016.

Taught evening courses in Welding Engineering, University of Idaho, 1992, 1996, 1997.

Member: American Welding Society, American Society of Mechanical Engineers.

Chair, American Welding Society Safety and Health Committee.

CONTACT

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