Romualdi, Davidson & Associates
Consulting Engineers

Robert Kimmick

P.E.
Email: Bobk@rdaweb.com

Summary Achievements

Over the past 25 years Mr. Kimmick has worked in various aspects of electrical engineering in commercial, industrial and power generating facilities. He has designed power distribution, communication, fire alarm, building automation and control systems. As a facility engineer/manager he has gained broad experience in maintaining, troubleshooting and upgrading building systems and equipment. He has extensive experience with electrical engineering analysis tools, ETAP and SKM Power Tools, which he has used to perform complete analysis of nuclear power generating stations electrical systems including power flow, short circuit, power quality, and transient analyses for both AC and DC systems. A summary of Mr. Kimmick's academic and professional career follows.

Professional Registration

Registered Professional Engineer in Pennsylvania, Ohio, West Virginia, South Carolina and Kansas.

Educational Background

B.S.E.E. - 1990 Pennsylvania State University

M.S.E.E. - 2014 Drexel University

Professional Experience

Romualdi Davidson & Associates, Inc., 2015-Present

Senior Electrical Engineer

Forensic Engineer responsible for performing a variety of electrical engineering investigations, to include fire cause and origin (C&O), water loss, systems failures, product liability, electrocution, property loss and machine control systems defects/malfunctions.

ESP Engineering, 1999

Principal operating a consulting engineering firm providing electrical designs for commercial and industrial new build and renovation projects, and electrical analyses for existing facilities.

Westinghouse Electric Company, LLC, 2007-2015

Principal Engineer

Responsible Engineer for the Post Fukushima FLEX electrical design at VC Summer Nuclear Station. Served as the PE in responsible charge of electrical design for the installation of electrical connection and completing analysis to support the strategy for response to a complete loss of electrical power.

Westinghouse Representative for the Nuclear Energy Institute Open Phase Working Group that developed analysis techniques, mitigation techniques, and standard designs in response to several open phase events that occurred in the global nuclear industry.

Technical Lead for the Post Fukushima FLEX electrical design. Lead a team of 6 electrical engineers responsible for the conceptual design of extended loss of AC power coping strategies at 13 nuclear power generating stations.

Developed plant strategies and conceptual modification designs.
Specified standard connectors and equipment.
Presented our conceptual ideas at the Nuclear Energy Institute Post Fukushima conference in 2012.
Recommended revisions to IEEE std. 308 and IEEE Std. 384 that will increase the standards scopes to deal with beyond-design basis situations.
Task Engineering responsibility on design change packages for various plants including but not limited to, VC Summer, Palisades, Palo Verde, Wolf Creek, Callaway, Diablo Canyon, Davis Besse, and Beaver Valley.
Lead System Engineer for the AP1000 plant control system design. Responsible for the plant control system design, including, but not limited to:
Defining the system architecture and allocation of functions to the architecture.
Providing criteria for the location of over 70 control cabinets throughout the plant.
Definition of interfaces to the system from field components, sensors and other control systems.

Sony Electronics, 1997-2007
Staff Facilities Electrical Engineer
Plant Electrical Engineer Responsible for directing, coordinating, reviewing and approving the work of three electrical engineers.
Engineering responsibility for entire electrical distribution system at 2.8 million square foot television manufacturing center. System consists of 12.47kV loop distribution system with 41 secondary unit substations, 1500kVA or larger.
Completed power distribution system design for a $95 million television production line.
Completed design of utility billing system for allocating cost of utilities to eight divisions that coexist in one building.
Developed maintenance specification for all facility electrical power equipment.
Completed arc-flash hazard, load flow, short circuit and coordination analysis for the entire system.
Engineering responsibility for electrical distribution system at 600,000 square foot television glass manufacturing plant. System consists of 12.47kV radial distribution system with 11 secondary unit substations, 1500kVA or larger.
Completed arc flash hazard, short circuit and load flow analysis for the entire system.
Completed design for the installation of 650kW load onto an existing 1,400kW diesel generator to ensure the glass tanks would not solidify during an extended electrical outage.

Powerex, Inc., 1995-1997
Manager, Plant Services
Managed physical plant, maintenance, environmental, safety, and security for 100,000 sq. ft. facility.
Department includes two engineers, one supervisor and thirty hourly personnel.

Westinghouse Savannah River Company, 1990-1995
Engineer
Served as a plant electrical engineer for four facilities totaling 450,000 sq. ft. for three years. Served as effluent monitoring system engineer for a 1,500,000 sq. ft. chemical separation facility for 1.5 years.

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Certifications

National Association of Fire Investigators, 2017
Certified Fire and Explosion Investigator

Professional Affiliations

Institute of Electrical and Electronic Engineers
National Society of Professional Engineers
Pennsylvania Society of Professional Engineers
National Association of Fire Investigators, C.F.E.I.

Honors

Tau Beta Pi - Engineering Honor Society
Eta Kappa Nu - Electrical Engineering Honor Society

Computer Skills

Proficient with OTI ETAP, and SKM PowerTools (Caper, Dapper, TCC, etc.) electrical engineering analysis software.
Proficient Allen Bradley PLC and numerical controls as well as Intellution and Wonderware SCADA software.
Proficient with AutoCAD drafting software.
Proficient with the Emerson Delta-V system and software.

Recent Training

PA State Fire Academy
Fire Dynamics Fundamentals
Fire Findings
Investigation of Gas and Electric Appliance Fires
2017 PAAI “Jack Christmas” Arson Seminar
Managing Large Loss Investigations, Arc Mapping, Meth Labs

Teaching Experience

Allegheny County Fire Marshalls Office
Sponsored by RDA
Basic Electricity, Utility Systems, and Electrical Failures
Pennsylvania State Police
Sponsored by RDA
Electrical Evidence in Fire Investigation