Credentials

Professional Engineer
Commonwealth of Pennsylvania License No. 21529 - E

Education

Bachelor of Science in Electrical Engineering
Lehigh University, 1970

Continuing Education Programs on :
Power System Analysis
National Electrical Code
Specifying Electrical Equipment
Specialized Electrical Engineering topics including: Grounding, Substations, Protective Relays, Motors, Generators, Transformers, & Uninterruptible Power Supplies

Professional Service Positions

Pennsylvania Society of Professional Engineers, Lehigh Valley Chapter; President
IEEE Power Engineering Society, Chapter Chairman
IEEE Power Engineering Society, Educational Committee Instructor for Lehigh Valley Chapter
ANSI Accredited Standards Committee C84, IEEE Delegate
IEEE Power System Analysis & Design Subcommittees & working groups

Professional Associations

Institute of Electrical and Electronics Engineers (IEEE)
National Society of Professional Engineers
Pennsylvania Society of Professional Engineers
International Electrical Testing Association
International Association of Electrical Inspectors
National Fire Protection Association

INSTITUTE FOR PRODUCTS, ENGINEERING & CONSTRUCTION IPEC
Tel: 888-212-1155 Fax: 888-414-1155 E-mail:ipec@forensicengineers.com

Administrative office:
34522 N. Scottsdale Rd.
Suite D-8 # 160
Scottsdale, AZ 85262

Engineering offices:
666 Fifth Ave., # 122
New York, NY 10103
Tel: 212-315-9523

231 North Ave. W, #134
Westfield, NJ 07090
Tel: 908-233-2973

1429 G St., NW, # 415
Washington, DC 20005
Tel: 202-822-9660

850 S. Rancho Rd, #4287
Las Vegas, NV 89106
Tel: 702-222-2481

Public Service Positions

President of Church Consistory
Chairman of Church Pastor-Parish Relations Committee
Boy Scouts of America - Scoutmaster 10 years, Cubmaster 4 years

Publications

IEEE Recommended Practice for Electric Power Distribution for Industrial Plants ("Red Book") - Chapter 3 chairman: Voltage Considerations
IEEE Recommended Practice for Electric Power Systems in Commercial Buildings ("Gray Book") - Chapter 3 chairman: Voltage Considerations
IEEE Working Group for new "Violet" Book, Short Circuit Calculations
IEEE Working Group for new "Yellow" Book, Guide for Maintenance, Operation and Safety of Industrial and Commercial Power Systems.

Courses & Seminars Taught

"Power System Design and Analysis" – ANSI/IEEE Standards, Equipment and System Voltages, System Loading, Efficiency, Power Factor Issues, Protective Device Time-Current Coordination, Fuses and Circuit Breakers. Short course for IEEE - Lehigh Valley Section.

"Specifying Electrical Power Equipment" -- Transformers, Efficiency, Switchgear, Circuit Breakers, Protective Relays and Controls, Switches, Pole-mounted Equipment, Electrical Clearances.. Short course for IEEE Lehigh Valley Section

Seminars utilizing The Electrification Council Course Materials for Power Distribution System Design, Load Estimating, Transformers, Switchgear, Power Factor and Efficiency. Presented for Metropolitan Edison, General Public Utilities.

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Areas of Concentration

- Electrical engineering
- High & low voltage power systems
- Failure analysis
- Field testing
- Electric power distribution
- Electric power protection systems
- Electrical utility services
- Overhead & underground systems
- Expansion & modernization programs for industrial plants
- Field surveys; recording instruments
- Resolution of unexplained fuse or breaker misoperation
- Construction and maintenance technical assistance
- Reliability assessment
- Loss prevention
- Grounding systems
- 25 hertz electrical systems
- Building electrical systems
- Electrocution & shock
- Electrical fires
- Power system analysis
- Short circuit analysis
- Protective device coordination
- Voltage regulation
- Motor starting
- Power factor improvement methods
- Energy savings
- Electrical power defects
- Electrical control defects
- Electrical safety
- Construction cost estimates
- Codes, standards & industry practice
- Emergency power systems
- Hazardous areas & equipment installations
- Establishing maintenance procedures
- Preparation of equipment specifications

Specific Experience & Interest

- Industrial facilities
- Commercial facilities
- Steel mills/integrated steel plants
- Blast furnaces
- Foundries
- Electric furnaces & ovens
- Gas-fired ovens
- Coke ovens
- Sintering plants
- Rolling mills
- Forges
- Electric cranes
- Material handling systems
- Machining and grinding
- Electrostatic precipitators
- Water treatment plants
- Substations
- Electric motors
- Transformers
- Switchgear
- Circuit breakers
- Relays
- Fuses
- Lightning (surge) arresters
- Automotive component manufacturing
- Paper industry
- Ceramic tile manufacturing
- Bakeries
- Air separation plants
- Cement plants
- Battery plants
- Magnetic oxide plants

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Professional Experience

Institute for Products, Engineering & Construction **1998 to Present**
Consulting forensic engineering services for attorneys and insurance companies. Services encompass the field of electrical engineering and focus on workplace safety and accident prevention, product liability and analysis of electrical design, manufacture and construction.

Smullin Engineering Inc. - President **1996 to Present**
Consulting, field testing, commissioning and forensic services for industrial, commercial and residential electrical systems. Services are provided to process industries, manufacturers, commercial facilities, contractors and insurance companies.

BOC Process Plants (Airco) - Lead Electrical Engineer **1993 to 1996**
Senior level design and commissioning of air separation facilities (international) for electrical power supply, power distribution, major equipment up to 14,000 horsepower, control systems, safety systems and failure analysis.

Crowder Engineering, Inc. - Senior Engineer **1985 to 1993**
Senior level consulting, design and field testing for most industrial and commercial facilities in the Greater Lehigh Valley, PA area. Concentration on failure analysis of systems and equipment such as misoperation of protective systems, unexplained failures and electrical fires.

Bethlehem Steel Corp. - Project Engineer **1970-1985**
Progressive electrical engineering and project management positions for the Bethlehem, PA plant, a fully integrated steel plant, involving all aspects of power distribution and controls for ironmaking, steelmaking, blast furnaces, basic oxygen furnaces, casting, molding, rolling, forging, machining, grinding and water treatment processes and related utilities such as electric, steam, water, gases and compressed air systems.

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