

Clifford McKeown

Electrical Engineer (Contractor) at Ametek Aerospace

North Wales, PA - Email me on Indeed: [indeed.com/r/Clifford-McKeown/31473f13534a90b1](https://www.indeed.com/r/Clifford-McKeown/31473f13534a90b1)

Extensive design experience as an Electrical Engineer and Project Manager in both new product development and production environments. Strong technical knowledge and project management skills, ranging from large systems to complex PCB and PCBA design and electronic equipment with an outstanding record of success in production integration, support and cost reduction.

WORK EXPERIENCE

Electrical Engineer (Contractor)

Ametek Aerospace - Sellersville, PA - November 2010 to July 2011

Electrical Engineer responsible for completion design and development projects charged with performing functional, acceptance, qualification testing, modification, and documentation of an airborne data acquisition system. Position requirements included:

- Directing and mentoring technicians and drafters providing engineering knowledge.
- Trouble shooting at the component and line code level.
- Hardware and firmware modifications.
- Experience with RTCA/DO-178B; RTCA/DO-160F; RTCA/DO-254; IPC 600; IPC 2221
- Maintaining all required project documentation.

Electrical Engineer/Project Manager

Siemens Water Technologies - Vineland, NJ - May 2005 to September 2010

Managed all aspects of capital design and redesign projects for standard product line of disinfection equipment for the water treatment industry to include scope definition, cost control, resource allocation, electrical engineering, PCB and PCBA design and implementation timetables.

- Completed a globalized design of wet chemistry systems for standard line of water disinfection analyzers, consolidating cost and manufacturing in one center. This design is compliant to CE 61010
- Redesigned the Titrating accessory control broad for updated components and efficient production reducing production cost by 18 to 23 %, employing experience with CE 61010; IPC 600; IPC 2221.
- Provided engineering knowledge for redesign of several aging products PLC based control systems to redesign them for cost reduction and obsolescence, yielding an average of 15 % improvement of cost and acceptance test from contract manufacturers.
- Participated as the electrical lead in the Continuous Improvement Projects (CIP) on the production floor to incorporate experience with Lean Practices into the work cells as well as provide electrical safety training and knowledge. Three of the projects yielded better than 20 % improvement of throughput.
- Managed and coordinated outside contract manufactures to source correctly assembled hardware and test electronic components, updating component assembly, test, and inspection procedures.
- Participated in the implementation of the SAP business system into the sustaining engineering group.

Electrical Engineer

Instruments for Research and Industry Inc - Cheltenham, PA - June 1998 to March 2005

Designed and maintained standard product line of temperature, vacuum, and pressure controllers utilizing my experience with OEM devices, engineering knowledge and design skills.

- Completely updated and resigned the product line of temperature, pressure and vacuum controllers improving manufacturing cost and reducing manufacturing time by as much as 50%.

- Employed my knowledge of IEC 61010; IPC 600; IPC2221 to redesign the control circuitry.
- Established standard assembly, test and inspection procedures, introducing production travelers, inspection reports and test reports for all units. This reduced our warranty returns to zero within a year.
- Developed new technical information and specifications for advertising.
- Attending trade shows quarterly to provide technical applications knowledge.
- Designed and developed the company's first interactive website in 2000 increasing sales 35 % while reducing overhead for order entry.

Electrical Engineer

Cytometrics Inc - Philadelphia, PA - February 1997 to June 1998

Electrical Engineer for a engineering team charged with design and development of diagnostic equipment bringing my hardware design skills and knowledge to the table.

- Development of hardware platform for real time video used in a non-invasive diagnostic system employing an Analog Devices SHARC DSP processor. Circuit Simulation and analysis using TopSpice.
- Designed a low cost power converter and charging system using Micro Chip PIC controllers.
- PCB and PCBA design using ORCAD for capture and layout compliant to IPC 600; IPC 2221.
- Prototype Hardware debugging, "C" and assembly code debugging.

Electrical Engineer

DA-TECH Inc - Ivyland, PA - August 1995 to February 1997

Test Electrical Engineer responsible for designing and implementing automatic tests and testing fixtures for contract products and design engineering team member.

- Programmed and maintained Genrad 228x and HP 3070 test stations and Labview based test stations.
- Circuit prototyping, testing, analysis and simulation using Pspice.
- Program and Hardware debugging in "C" and MicroChip Assembly.

Electrical Engineer

EIT Inc - Exton, PA - April 1994 to August 1995

Electrical Engineer team member charged with designing, simulating, prototyping and testing a common hardware and firmware platform for a new line of water quality analyzers.

- Designed and tested circuitry for both analog front end and microprocessor circuitry using HIWIRE as primary capture and layout tool and TopSpice as a simulator tool.
- Designed a common NEMA 4X membrane front panel for harsh environmental conditions using AutoCad.
- Created production methods, test and inspection criteria and procedures.

Electrical Engineer

Stokes-Merrill Inc - Bristol, PA - January 1992 to December 1993

Electrical Engineer/Project Engineer responsible for design and implementation of PLC, computer interface control, and drive systems for rotary and single punch presses to conform to customer requirements.

- PLC Programming in Ladder Logic, communications interface with HMI's and SCADA systems.
- Ladder design using AutoCad and control panel design and layout.
- Writing test requirements and protocols.
- Start up at customer site.

Electrical Engineer

Pro-Tech Inc - King of Prussia, PA - February 1986 to January 1992

I was the Electrical Engineer responsible for the design, development, test and management of a product line consisting of Ultrasonic Level meters and water sampling equipment.

- Design of 8051 based control circuitry using PCAD, simulation with TopSpice.

- Mechanical design with AutoCad
- Field commissioning and start up and in house customer service.

Electronics Engineer/Technician

Site Microsurgical Systems - Horsham, PA - March 1984 to January 1986

As the Electronics Engineer on the design and development team I was responsible for the design and development of the control electronics for the Phaco Emulsifier system.

- Mechanical, Schematic and circuit PCB and PCBA layout using AutoCad.
- Reviewed design for agency safety submittal such as UL, CSA, and VDE.
- Designed and maintain all test fixtures and test procedures.

Electronics Engineer

The Fredericks Company - Huntingdon Valley, PA - March 1981 to March 1984

My primary responsibility as the Electronic Engineer for design and development was to re-design and maintain the line of digital vacuum gauges using the 8051 microprocessor programmed in assembly interfaced to their line of thermocouple and hotwire vacuum sensors. PCB and PCBA layout was done with AutoCad.

Engineering Technician/Junior Engineer

K.L.I. Inc - Newtown, PA - July 1975 to March 1981

I assisted senior design engineers in the development of equipment used in gynecological diagnostic medicine and electro surgical instruments.

Airframes and Power Plants Technician

United States Marine Corps - April 1971 to April 1975

After completing my tour I was honorably discharged as E-5 Sergeant.

EDUCATION

Bachelor of Science in Electrical Engineering

Villanova University - Villanova, PA

Technology, Electronics Technology

Devery Institute of Technology

ADDITIONAL INFORMATION

SKILLS

Word
Excel
PowerPoint
Access
Outlook
Project
FrontPage
Publisher
AutoCad
Visio
PRO-E

Spice
Orcad
PADS
PCAD
HIWIRE
ACROBAT
PhotoShop
Corel Draw
Dreamweaver
Labview
MATHCAD
SAP
NEC
NFPA 70e
IPC 600
IPC 2221
DO-178B
DO-160F
DO-254
[...]
Altium