JOHN A. CERNETICH, PE
Senior Engineer I

PROFILE

Engineer with over 35 years of experience in mechanical and electrical engineering.

EDUCATION

Bachelor of Science – Mechanical Engineering (completed 68 credits)
University of Pittsburgh at Johnstown, 1967

Bachelor of Science – Electrical Engineering Technology, University of Pittsburgh at Johnstown, 1975

Technical Schools – U.S. Navy:

- Aviation Fundamentals Class "P" School, April 1968, NATTC, Memphis, TN
- Avionics Fundamentals Class "A" School, April-July 1968, NATTC, Memphis, TN
- Aviation Electronics Technician Class "A" School, July-Sept.1968, NATTC, Memphis, TN
- Miniature Component Repair Class "C" School, Feb. 1969, NAMTG, NAS Quonset Point, RI
- Basic Electricity Class "C" School, March 1969, FAETU, NAS Jacksonville, FL

CERTIFICATIONS/TRAININGS/AFFILIATIONS

Professional Engineer No. PE-32073-E, Pennsylvania, 1983
Engineer-in-Training Certificate, Pennsylvania, 1975
Society of Undergraduate Engineers, University of Pittsburgh at Johnstown
Institute of Electrical and Electronic Engineers (IEEE) - Student Chapter,
University of Pittsburgh at Johnstown
IEEE-Johnstown Section -1975 to present; Chairman 1989-1990
Delta Sigma Chi Fraternity-University of Pittsburgh at Johnstown

MILITARY

Aviation Electronics Technician
United States Navy (1968-1971)

- E-5
- Secret Security Clearance

PROFESSIONAL EXPERIENCE

Independent Electrical Engineering Consultant (2008-Present)
Electrical Design including service entrance, sub-feed panels, interior, exterior and emergency lighting, convenience receptacles and panel schedules with associated conductor and conduit specification for the following facilities:

- 50' x 90' Training Facility including classrooms, restrooms and equipment/vehicle garage.
- 60' x 100' Office/Repair Shop for a Construction Company
- 36' x 82' Classroom/Restroom Addition to a Religious Facility

On-going design and specification of "Modular" (Semi-Portable) treatment plants for:

- Gas well "produced water" to service the Marcellus Shale natural gas reserves
- Coal-fines treatment facilities to service existing Western PA reclamation sites

Electrical Engineering Consultant, Part Time (2008-Present)
Maple Mountain Industries, Inc., New Florence, PA

- On-going maintenance and operation of remaining water treatment facilities, electrical distribution and utilization, phone and alarm systems of Corporate Complex in New Florence
- Electrical Design of a 95' x 160' Commercial Showroom/Warehouse Facility including Service entrance, sub-feed panels, interior, exterior and emergency lighting, convenience receptacles and panel schedules with associated conductor and conduit specification
- Preliminary design and specification of a 150-450 gallon/minute gas well "produced water" treatment plant to service the Marcellus Shale natural gas reserves

Chief Engineer (1994-2007)
Maple Mountain Industries, Inc., New Florence, PA

- On-going maintenance and operation of remaining water treatment facilities, electrical distribution and utilization, phone and alarm systems of Corporate Complex in New Florence
- Specification, installation and maintenance of all new electrical, telephone and alarm systems across the (22) Maple Mountain Equipment and Builders' Surplus Retail locations
- Project Manager/Sales Representative for Butler Manufacturing Steel Buildings including sales contracts, building pricing from customer guidelines and specifications, contract administration, sales order submittal and project management through final completion and Labor & Industry Occupancy
- Project Manager for Lester, then Wick Timber-Frame building construction
- Utility contact for Maple Mountain Homes new construction on an as-needed basis

Systems Manager (1997-2000)
Maple Mountain Industries, Inc., New Florence, PA

- Installation and upgrade of all computer- and network-related systems including hardware and software for each new facility as it came on-line
- Day-to-day maintenance of file systems for each location including A/P, A/R, Inventory, Point-of-Sale and a Production-Oriented Furniture Manufacturing System
- Y2K Compliance for all equipment and software
- Specification, purchase, and implementation of a software-based furniture production system including all aspects of production from receipt of raw materials through manufacturing to final customer billing and product shipping

Chief Engineer (1991-1993)
The Florence Mining Company, New Florence, PA

- Supervision and organization of the Engineering Department in the day-to-day and long-term operation and maintenance of the mining company
- All PA DEP permits and permit amendments
- Mapping required for mine planning, projections, ventilation, subsidence and permitting
- Oversight of contract survey crew responsible for mine surveys
- Monthly production reports including raw coal, clean coal, reject and purchases coal tonnage reconciliations
- Development and implementation of permanent mine sealing and reclamation as well as long-term water treatment plans for two operating mines
- Specification and bid review of various mine closure-related projects

- Maintenance of surface and underground high voltage transmission and distribution systems
- Developed a system to maintain tax accounting for Florence surface and coal lands

Construction Foreman (1990-1991)

The Florence Mining Company, New Florence, PA

Supervision of four UMWA employees in the maintenance of Florence surface properties with general responsibility for:

- Maintenance of roads and rights-of-way including grading, ditching, snow plowing and vegetation control
- Maintenance of buildings including electrical, plumbing, heating and sewage
- Maintenance of two acid-mine-drainage (AMD) plants and three sewage treatment plants including scheduled and unscheduled maintenance and lubrication
- Construction of access roads as necessary
- Loading and stowage of refuse material from several sites

In addition to the above, the construction crew completed three major projects:

- Complete installation of a 100-Ton truck scale including layout, forming and pouring of concrete support piers and installation of scale pivot and support members
- Upgrading the existing sludge pumping system from 2x40 HP pumps to 2x100 HP pumps including structural, piping and electrical wiring and control
- Concrete work and welding associated with a Bypass Copal Crushing Circuit
- My personal responsibilities included the maintenance of the surface and underground high-voltage transmission and distribution systems as well as wiring and control responsibilities for all surface systems. I utilized the construction crew, mine personnel, or outside contractors as appropriate

Electrical Engineer (1980-1990)

The Florence Mining Company, New Florence, PA

My primary responsibilities included the maintenance of the surface and underground high-voltage transmission and distribution system as well as all electrical and control equipment including:

- 8 Substations
- 5 miles of 46 KV Surface distribution
- 6 miles of 13.2 KV distribution
- Approximately 30 miles of 13.2 and 7.62 KV underground distribution
- 5 Mine sites including four 800 HP Ventilation Fans
- 4 Acid Mine Drainage Plants (two with PLC control)
- 2 Preparation Plants
- Office, Training and Central Shop facilities

Assistant Electrical Engineer (1975-1980)

The Florence Mining Company, New Florence, PA

My primary responsibilities, under the supervision of the Chief Electrical Engineer, included the maintenance of the surface and underground high-voltage transmission and distribution system as well as all electrical and control equipment including:

- 8 Substations
- 5 miles of 46 KV Surface distribution
- 6 miles of 13.2 KV distribution
- Approximately 30 miles of 13.2 and 7.62 KV underground distribution
- 5 Mine sites including four 800 HP Ventilation Fans

- 4 Acid Mine Drainage Plants (two with PLC control)
- 2 Preparation Plants
- Office, Training and Central Shop facilities

Field Engineer – Fuels Department (1973-1974)
Bethlehem Steel Corporation, Johnstown, PA

Laborer – Car Department (1972)
Bethlehem Steel Corporation, Gautier Division, Johnstown, PA

Laborer – Blast Furnace (1965)
Bethlehem Steel Corporation, Johnstown, PA

PARTIAL PROJECT EXPERIENCE

PrepTech / Diversified Fabrications
Upgrade the electrical distribution in an existing building to facilitate the startup of a steel fabrication business

Project Manager/Sales Representative for the following commercial building projects:
- Olympia 50' x 60' Machine Shop
- Butler 52' x 84' x 29'-6 Industrial Water Treatment Plant
- Butler 100' x 225' Office/Manufacturing/Warehouse Turn-Key construction including complete electrical distribution
- Butler 60' x 125' Repair Shop/Office Turn-Key construction including complete electrical distribution
- Butler 30' x 150' Self-storage Facility including management of the construction crew

Project Manager for the following building projects:
- Wick 30' x 48' Warehouse/Manufacturing/Office including electrical
- Wick 52' x 60' Garage/ Shop
- Butler 80' x 126' Recreation Hall

Meyersdale Warehouse
- Renovation of the electrical distribution to implement relocation of production from a storm-damaged building

Robinson A.M.D.
- "Dumbing-Down" the PLC-based control system to simplify the control scheme and eliminate dependence on a diminishing-availability, old-technology PLC

Florence 46/23 KV Power Reconfiguration
- Supervise the elimination of the 46 KV power distribution at mine closing and re-establish a 23KV feed to supply power to the remaining facilities

Uniontown/Washington Surveillance Cameras
- Specification, purchase and installation of a computer hard-drive-based video surveillance and storage system and cameras including a motion-sensor actuated flood light system at each location

Florence No. 2 Mine
Developed specifications and supervised construction of the following:
- PLC-based fan-signal system for two portals located two miles apart including 10,000 feet of interconnecting communication cable

- "D" Seam Portal Electrical Distribution including bathhouse, fan, elevator, site, substations, mine-power borehole and sewage plant
- Developed mine electrical and obtained electrical permit
- Specified and bid all underground power distribution equipment and cable

- Developed specifications, bid and supervised construction of a 750 gallon per minute pumping station situated over the Florence "E" Seam fan shaft including structural steel, concrete, and associated piping to an underground mine pool borehole
- Developed specifications, bid and supervised the drilling of a 600' interseam, dewatering borehole between the "E" and "B" seams including location surveys

Heshbon Mine

- Developed electrical specifications and supervised construction of the portal and bathhouse facilities including a 2000 KVA mine-power substation, 300 HP fan and radial stacker
- Developed mine electrical plan and obtained the electrical permit
- Specified and bid all underground power distribution equipment and cable

Central Preparation Plant

- Developed specifications for a 2000 HP wet cleaning plant including a 5000KVA, 46KV to 13.2 KV substation, 5-1000 KVA 480 volt and 1-1500 KVA 2300 volt Motor Control Centers and Allen-Bradley PLC control
- Supervised construction and startup of the electrical portion of the project

Lucerne No. 6 Extension, Helvetia Coal Company, R&P Coal

- Developed electrical specifications and supervised construction of the portal and bathhouse facilities including a 2000 KVA mine-power substation, 600 HP fan with reactor start, and load-out facilities
- Developed mine electrical plan and obtained the electrical permit

Margaret 11 Mine, Keystone Coal Company, R&P Coal

- Assisted in the development of electrical specifications for portal, bathhouse, fan, mine power feed and electrical permit

Florence No.1-Robinson Portal

Developed electrical specifications and supervised construction of the following:

- 2-3300 gallon/minute Acid Mine Drainage (A.M.D.) treatment plants including power distribution and PLC control
- A 6000 gallon/minute pump station which maintains a specified mine pool elevation in the sealed No.1 Mine including power distribution and PLC control
- A 600 gallon/minute sludge pumping station including power distribution air-operated valving and PLC control tied to the AMD plants

Triebel, Inc.-Laurel Mine

- Maintained surface power distribution and electrical operation of existing water treatment facilities