

804 Division Ave
Willow Grove, Pa. 19090
215-407-2633
mrlayneo@comcast.net

Layne Blavier, P.E.

Professional Experience

Engineering Manager

2011 – Present ESW Group, Montgomeryville, Pa

Engineering Manager of the Product Support group. Responsibilities include directing a team of engineers in the design, draft, and testing of catalytic converters for diesel engines of on and off road vehicles. Responsible for guiding the team in our engineering lab and office as well as a vehicle dedicated to on road field testing. Additional responsibilities include the administration of the SolidWorks EPDM network that provides our platform for designing all of the product components and test rig fixturing.

- Manage Engineering department
- Exhaust gas flow simulation
- Design and development of new products
- Sustaining Engineering
- Support Manufacturing group
- Support Field service team investigating warranty related issues
- Service manual and technical service bulletin creation

Senior Project Engineer

2006 – 2011 Johnson Matthey, Inc. Malvern Pa

Project management of large stationary industrial catalytic converter systems for diesel and natural gas engines and turbines. Includes design, draft, order, installation management, and commissioning of products. Other responsibilities include:

- Manage projects from inception to commissioning
- Development of mathematical models for pressure drop through units.
- Design and development of silencer products
- New product development
- Product inspection and vendor qualification

Senior Mechanical Engineer

2000 – 2006 General Machine Products, Inc. Trevese, Pa.

New product development of specialty installation equipment for the telecom industry. Responsibilities include; design, model, draft, and testing of products. Extensive use of all types of materials and processes including: Carbon, Alloy, and Stainless steel, plastics, rubber, wood, fiberglass, and Kevlar; castings, forgings, weldments, and machined components.

- Battery powered, motorized, remote controlled drive unit.
- Kevlar tethered breakaway swivel for underground cable pulling operation.
- Aluminum Split Sheave and Steel Shackle for underground vault work.
- Redesign electric motor driven hoist.

- Evaluate & redesign new 3rd party submitted products.
- Leader of design team.
- Design and conduct tests of products for specification verification.

Product Design Engineer

1994 – 2000 Alfa-Laval Separation, Warminster, Pa.

Product Design and development of high speed centrifuges and associated ancillary equipment. Responsibilities include; design, model, and draft of products.

- Design of medium and high speed rotating centrifuges
- Key member of a Tiger Team that reduced the manufacturing cost of the #1 selling product by 35%. Team responsibility included; Design of new rotating assembly, structural frame and drive assembly.
- Design of special wheeled carts and equipment for centrifuge service.
- Failure analysis and investigation for service department.
- Design of vertical rotating blood separator with sanitary fittings.

Mechanical Designer

1991 – 1994 Premier Refractories, King of Prussia, Pa

- Design and layout of refractory walls for;
- Steel mill furnaces, crucible, ladles, and Kilns
- Boilers for trash to steam plants

Mechanical Designer

1990 – 1991 Finmac Corp., Hatboro, Pa

- Design, layout, and draft components for specialized sandblasting and deflashing machines.
- Components included belt feed systems; cartridge feed systems, indexing tables, air-drying stations, and stacking devices.

Mechanical Designer

1988 – 1990 Pennwalt Corp., King of Prussia, Pa

- Design of machines and processes in the manufacture of Piezo (Kynar) Film devices.
- Processes included double side silk screening of thin film with silver ink and accurate steel rule die cut out of devices.
- Designed machine for manual dispensing of double sided tape.
- Designed hand operated machine to accurately pierce and apply silver ink to a cluster of 20 silk-screened devices.

Mechanical Designer

1987 – 1988 Orbital Engineering, Langhorne, Pa

- Designed stations for automation of Plexiglas finishing process. Linear bearings, limit switches, and pneumatic cylinders were major components.

Mechanical Designer

1982 – 1987 Environmental Tectonics Corporation, Southampton, Pa

- Design and draft industrial and hospital sterilizers. Sterilizers consisted of steam, vacuum, water, and gas piping systems; structural steel frames, sheet metal covers.

- Designed special guillotine door for large industrial sterilizer. Door utilized lift motor, brake motor, gears, chains, counter weights, and limit switches.
- Layout of components for pilot ejection seat trainer and human centrifuge.

Mechanical Designer

1977 – 1982 Milton Roy Company, Ivyland, Pa

- Design, layout, and draft chemical feed systems incorporating Milton Roy metering pumps. Systems included the following components:
- Structural frames, skids, multi-level decks
- Chemical holding tanks manufactured from steel, stainless, and fiberglass.
- Pressure and non-pressure vessels
- Sheet metal
- ¼” thru 24” welded, threaded, soldered, plastic, lined, flanged, and sanitary piping connecting pumps and tanks.
- Designed spreader bars other lifting devices for transporting and installing chemical feed systems.
- Drafting and design checker for design team.

Education

Drexel University, Philadelphia Pa.

1997 Bachelor of Science Mechanical Engineering

2001 Master of Science Mechanical Engineering

2004 Licensed Professional Engineer: Pennsylvania (# PE062853)

Computer Solid Works 3-D Modeling, Flow Simulation, FEA

Experience AutoCad

Cosmos FEA

Mapics / BPCS Bill of Material software

Microsoft / Windows Software

Professional ASME

Membership NSPE

PSPE

Accomplishments 2nd Degree Black Belt, Tang Soo Do

Interests and Eagle Scout

Activities Past President, Bucks County Civil War Roundtable

Member Adopt-A-Highway Program

Member Friends of National Parks at Gettysburg

Martial Arts, Golf, Tennis, Skiing, Music (Drummer & Guitar)