

# Brett Shallcross

## Electrical Engineer - Alloy Surfaces Co. Inc

Malvern, PA - Email me on Indeed: [indeed.com/r/Brett-Shallcross/620e7e0aa48b9ea3](https://www.indeed.com/r/Brett-Shallcross/620e7e0aa48b9ea3)

Hands on electrical engineer with strong troubleshooting and mechanical skills who can improve manufacturing and support operations by leading multiple simultaneous design or improvement projects.

### WORK EXPERIENCE

#### Electrical Engineer

Alloy Surfaces Co. Inc - Chester Township, PA - February 2003 to Present

Designed, programmed and constructed control systems for processing and assembly equipment used in the production of military countermeasures using latest NEC and NFPA79E safety standards.

- Familiar with electrical design requirements for NEC classified hazardous locations and intrinsically safe wiring methods.
- Responsible for developing electrical schematics, programs, standard operating procedures, preventative maintenance procedures, panel layouts, P&ID diagrams and bills of material for process equipment.
- Active in troubleshooting process and plant support equipment such as chillers, dust collectors, scrubbers, fume ventilators, chemical feed pumps and HVAC equipment.
- Responsible for operations, calibrations and maintenance of 0.04 MGD process waste water treatment system.
- Oversaw electrical equipment installation of 2 new 60,000 square foot facilities to enable production ramp up.
- Responsible for planning, implementing and executing multiple simultaneous capital projects with budgets up to \$250,000.
- Automated vacuum drying process that doubled production throughput, improved product repeatability and generated labor savings of \$200,000.
- Led glove box automated access control system project which reduced RULA ergonomic score from 6 to 3, enforced operator compliance to procedures and eliminated contamination to controlled environments.
- Developed control portion of an automated chemical immersion process system which improved process capability and reduced operator injuries by 30%.
- Identified and corrected software and sensor issue on automated loading machines that enabled timely completion of a contract worth in excess of \$1,000,000.

#### Process Engineer

Agere Systems/ Lucent Technologies - Allentown, PA - October 2001 to December 2002

Maintained, troubleshot, programmed and upgraded automated handling equipment, vision processors and associated fixtures.

- Created electronic wafer maps for process equipment setup.
- Monitored data transfers from manufacturing line to plant network and database.
- Designed fixture modification reduced scrap by 15%.

#### Testing Engineer

Agere Systems/ Lucent Technologies - Reading, PA - July 1999 to October 2001

Responsible for all activities on a semiconductor laser testing line including troubleshooting, quality and maintenance.

- Led laser burn in equipment process improvement project with a budget of \$50,000 and a team of 3 technicians. Project resulted in additional revenue of \$200,000.

- Modified test procedure increased yields from 65% to 95% with savings of \$700,000.
- Planned and carried out laser test line relocation in plant involving team of 5 tradesmen. Returned line to service 1 week ahead of deadline and \$30,000 under budget.

### **Co-op Engineer**

Perfecseal Incorporated - Philadelphia, PA - August 1997 to August 1998

Maintained flexible film coating, printing and converting equipment.

- Carried out validations, quality control testing and capability studies on medical packaging.
- Led teams of electricians, machinists and mechanics in maintenance and repair projects.
- Designed mechanical and electrical components for use on production equipment.
- Assisted in product design.

### EDUCATION

#### **BS in Electrical Engineering**

Lehigh University - Bethlehem, PA

1999

### ADDITIONAL INFORMATION

Computer Skills:

Allen Bradley RSLogix 500, Allen Bradley PicoSoft, Allen Bradley Panel Builder 32, GPPro PB3, GE Quick Panel, AutoCAD, SQL, Unix and MSOffice.