

Steve A. Couch

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Summary of Qualifications:

BSET - Bachelors degree engineering technology. 30+ years engineering related design / project management. Proficient in these engineering softwares: 3D - PDS Equipment / Piping modeling / design, Isogen, SmartPlant Review, Microstation, AutoCad.

Experienced ability to contribute to projects at all levels of involvement including: client contact, proposal initiation, estimating-scheduling (project management), concept, front end - feed design thru detail design (project engineering), cad automation-standardization.

Industries: Nuclear, Energy, Power, Petroleum / Refinery, Chemical, Logistics, Transportation, Manufacturing and Defense.

Professional Experience:

BURNS & McDONNELL (9th Largest design firm in USA) Kansas City, MO (contract)

- **Phillips 66 (formerly ConocoPhillips)** - Ponca City, OK, oil refinery, phased process system upgrades, Tie-in points, piping/equipment interface and rack piping utilizing SmartPlant Review, Intergraph PDS routing/isometrics, Pelican Forge supports and LFM laser scan software for as-built verification.

JACOBS (Largest design firm in USA) Baton Rouge, LA (contract)

- **Shell** - Norco, LA oil refinery, process system upgrades and relief valve piping utilizing Intergraph PDS and laser scan software for as-built verification.
- Methanex, methanol production – 3 Billion dollar project, dismantle and relocation of facility in Chile, South America to Geismar, LA.

DAY & ZIMMERMANN Chattanooga, TN (contract)

Invista (DuPont Kordsa)

- Pet & Nylon resin polymer fiber production, verification and documentation of existing pressure relief piping calculations for autoclaves and various process equipment.

DAY & ZIMMERMANN Decatur, AL (contract)

- **Ascend Performance Materials (Solutia Monsanto)** Chemicals group
- Plastics, chemicals, polymers and fiber production upgrades involving various mechanical equipment and piping, for: separators, decanters, off-gas scrubbers, degassers, reactors, tanks, pumps, coolers and filters.
- As-built Quantapoint laser scanning, Prism 3D - PDS Equipment, Piping modeling/design and Isogen, Microstation, SmartPlant Review.

JACOBS Baton Rouge, LA. (contract)

- **BP** \$3 billion Whiting Refinery, Whiting, Indiana – Modular design
- 3D - PDS Equipment, Piping modeling/design and Isogen, Microstation, SmartPlant Review
- Autocad - Process and Instrumentation diagrams

DAY & ZIMMERMANN Greenville, SC. (contract)

Chemicals group – Modernization project for Eastman Chemical Company North American Corporate Headquarters

- 3D - PDS Equipment, Piping modeling/design and Isogen, Microstation, SmartPlant Review

FLUOR Greenville, SC. (contract)

- Energy and Chemicals group – LDK Solar Polysilicon – Contract \$1billion +++.
- Production of raw material for photovoltaic products, solar cells and modules.
- 3D - PDS Equipment, Piping modeling/design and Isogen of Off-Gas recovery and Infrastructure. SmartPlant Review.
- Microstation and Acad site plan, equipment layouts and pipe support details.

LURGI

Memphis, Tn.

- Refinery design, Ethanol, Bio-diesel.
- 3D - PDS Equipment, Piping Modeling/design and Isogen. SmartPlant Review.
- PDS Isometric Checker of PDS generated ISO drawings checked against PID'S, Line list, Equipment list, and Equipment layouts.
- Produced/modified PID's with process engineers including checking against Line list, equipment list, and piping specifications.
- Assembled data from process diagrams (PID) and vendor data producing equipment layouts.
- Incorporated details from above to produce process piping designs.
- Coordinated data with all disciplines including: Structural, Civil, Mechanical, Electrical, and Controls/Instrumentation groups.
- Clarified above design information with fabricators as required.
- Supervised draftsmen.
- 20 years + CAD Skills include 2d / 3d , PDS-Plant Design System, Microstation, Autocad, Mainframe "Prime Medusa".
- P.D.S. (Intergraph) Training - 3D Plant Design System cad and database software (including): Drawing Manager, Equipment Modeling & Piping Design
- **FedEx Federal Express**, Domestic and international project locations including: Philippines, Japan, France (travel), and Canada and Alaska (travel).
- Responsible for traveling to new project locations, interfacing with clients and securing vital field data for engineering design and coordination with various disciplines.
- Estimate, review and approve package conveyance designs and calculations for systems and components. Coordinate engineering and construction efforts on all material handling projects with structural and electrical groups.
- Support project management with engineering proposals, bid packages, estimates, scheduling, specifications, and supervision.
- Responsible for project performance and client/vendor contacts and interface.
- Developed Federal Express design standards resulting in 33% reduced project design time.
- Construction management of critical Federal Express super-hub projects.

FedEx Federal Express (Consultant) Memphis, Tn. ISO 9000 Quality System

Planning Division (Sort Systems Conceptual design):

- Developed conceptual design of sort systems for both new and existing corporate facilities nationwide.
- Integrated operational requirements for sort operations.
- Incorporated operational requirements for air/ground operations.

Mechanical Engineering Division (Sort Systems Detail Design):

- Developed corporate wide conveyor and sort equipment design standards.
- Developed corporate wide spiral chute prototype models and standard designs.
- Refined automated cad program and database capable of producing 8,000 variations.
- Variational geometry and databases used to produce cad graphics.
- Developed custom macro driven cad programs utilizing (SuperSyntax language) resulting in maximum production rates.
- Results: \$500,000 annual savings, = 1,000% productivity increase over manual methods and increased accuracy.

Southern Systems

Memphis, Tn.

- Designed manufacturing & production processes for a variety of conveying systems and automation equipment including chain, roller, belt, over-head power and free, and transfer units .
- Coordinated data with purchasing, shop and field personnel.

Belz Enterprises Memphis, Tn.

Designed new retail and office space for this major real estate developer.

SteelCraft Corporation Memphis, Tn.

International Project location, Cairo Egypt. Designed a variety of complex transition spouting for a major grain storage facility.

PSI , Process Systems Inc Memphis, Tn.

Supervised draftsmen.

- Assembled data from process diagrams and vendor drawings producing equipment l/o's.
- Incorporated details from above to produce process piping designs.
- Coordinated data with all disciplines including: Structural, Civil, Mechanical, Electrical, and Controls/Instrumentation groups.
- Clarified above design information with fabricators as required.

Dover Corporation - Elevator Division Horn Lake, Ms.

Designed manufacturing & production processes for final assemblies of oildraulic and traction powered passenger and freight elevators.

- Adapted oildraulic and traction powered passenger and freight elevator designs to a variety of buildings to producing required shop and installation drawings.

ITT International Telephone Telecommunications Milan, Tn.

- Produced detail drawings for control telephone switching system.
- Resulted in improved design and cost reductions.

Education

(Self- Funded, attended night classes while working full time.)

**B.S. Engineering Technology •
University of Memphis • Memphis, Tn**

Specialized course work in architecture.

Also, Structural Design, Specifications and Contracts, Electronics, Building Codes, Construction Systems, Machine Production, & Mathematical Analysis.

A.S. Engineering Technology • State Technical Inst • Memphis, Tn

Specialized course work in architecture.

Also, Management, Calculus, Physics, Mechanical & Electrical Equip., & Estimating.

Accomplishments

Federal Express "BRAVO ZULU" Award for excellence maintained in the design of a sort facility in Atlanta, Ga.

Additional Training & Miscellaneous

- P.M.I. - Project Management Institute
- P.M.P. - Project Management Professional (Training)
- A.S.M.E. - American Society of Mechanical Engineers
 - Computer Simulation of Material Handling Systems
 - Systematic Facility Layout & Planning

- Franklin Quest Time Management
- Computer Vision, Medusa cad and database software
- AutoCAD 11 through 2000 including 3D cad software
- P.D.S. (Intergraph) - 3D Plant Design System cad and database software (including):
Drawing Manager, Equipment Modeling & Piping Design
 - Word, Excel, Access, PowerPoint