

Jeff Agnew

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SUMMARY: Currently performing construction oversight and project engineering responsibilities on a new coal fired power plant, I have realized that machine design is where my passion really lies. I have professional experience overseeing steam turbine, compressor, fan/blower, and pump assembly, run-in, and trouble shooting and personal experience working on cars and even successfully rebuilding an automatic transmission. Graduate level coursework primarily focused on turbomachinery (theory, aerothermodynamics, rotordynamics), but also included subjects such as finite element analysis (FEA), fluid mechanics, heat transfer, and aerosols. I am interested in all types of rotating and reciprocating equipment, including compressors, turbines, engines, fans/blowers, turbochargers, pumps, ect. I realize the value of practical experience and have no problem starting with machine assembly, diagnosis, failure analysis, ect. before moving onto design. I am actively searching for the opportunity to learn and become a competent machine design engineer, and contribute those abilities to the development of a company.

OBJECTIVE: A full time position performing detailed design and analysis of rotating or reciprocating machinery, and overseeing prototype manufacture, testing, failure analysis, and final product installation.

EDUCATION: **Master of Science in Mechanical Engineering** (September 2010, coursework is complete now)
Texas A&M University, College Station, TX
3.0/4.0 cumulative GPA
Coursework subjects included turbomachinery, heat transfer, fluids, finite elements, and aerosols.

Bachelor of Science in Mechanical Engineering (December 2006)
Arkansas State University, Jonesboro, AR
Distinguished Graduate in Mechanical Engineering
3.2/4.0 cumulative GPA

EXPERIENCE: **Mechanical Engineer I** (September 2008 – Present)
Dynegy, Inc., Construction, Development, and Repowering Group, Houston, TX
Regular field rotations conducted to the Plum Point Energy Station in Arkansas focus on quality control and identifying problems and ensuring they are resolved. This has provided opportunities to learn major systems of a coal fired power plant and ensure they are built correctly, participate in and oversee equipment commissioning and testing, and act as an owner witness for various construction and startup activities. Early on, P&IDs were reviewed for logic and completeness, and are now used frequently for walk downs to ensure systems are built per design. Daily interaction with engineers, startup, and construction personnel to get status updates and build working relationships. I oversaw the installation, troubleshooting, and testing of the site fire protection system, including performance testing of the fire pumps for acceptance purposes. As an owner witness, I helped oversee the assembly of a 720 MW (gross) steam turbine train.
Other activities: I developed an emissions estimation calculator to compare gas turbines for potential repower projects in California. In conjunction with an EE, I researched and prepared a study of solar photovoltaic technologies for possible addition to current conventional generation facilities in Arizona. I worked with the environmental group to construct wastewater permit modification and to identify possible solutions to fly ash leachate disposal.

Research Assistant (June 2007 – August 2008), **Teaching Assistant** (January 2007 – May 2008)
Texas A&M University, College Station, TX
Research assistant at the Texas A&M Turbomachinery Laboratory:

I worked on an existing hydrodynamic bearing test rig and investigated the rotordynamic properties of a flexible pivot pad bearing with and without an integral squeeze film damper. Test results are compared to computer

models. In addition to a thesis capstone, the project also included trouble shooting electrical and mechanical equipment and interfacing with shops to have new test rig parts machined.

Teaching assistant for sophomore level intro to engineering class:

Graded coursework, kept track of grades, and held study sessions for 94 students. Study session typically consisted of help with SolidWorks.

Customer Sales Associate (March 2005 – December 2006)

Lowe's Home Improvement, Jonesboro, AR

Worked primarily in Paint, Walls, and Windows but helped in other departments, cashiered, and loaded as needed. I mixed paints to customer specifications, and helped customers choose the right products for their projects. I also demonstrated paint application techniques and ensured customers were aware of everything they needed.

Other Past Work Experience

Ace Hardware; Painting and House Repairs

OTHER SKILLS: Computer: Solid Works; AutoCAD; COSMOS; ANSYS; MATLAB; Microsoft Office
NOTE: Several examples of Solid Works capabilities in a report format available upon request.
Hands-On: Manual machining (lathe, mill); MIG welding (see certificate below); Electrical wiring;
Automotive transmission rebuild (manual and automatic); Blacksmithing

CERTIFICATIONS AND MEMBERSHIPS:

American Red Cross Basic First Aid and Adult CPR (2010)

American Society of Mechanical Engineers (Member, 2005 – Present)

Engineer in Training (AR EIT #7085, October 2006)

MIG Welding Certificate, for 25 hours of instructed welding (2007)

OSHA 30 Hour Construction Safety (2008)