

# Isaac Patrick West

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**EDUCATION**     **Purdue University, B.S.M.E.**, May 2007  
School of Mechanical Engineering, West Lafayette, IN  
Significant Course Work: Machine Design, Vibrations, Automatic Controls, Formula SAE

**WORK**            **Project Engineer**, West Coast Plant Project Engineering

**EXPERIENCE**   **Air Products and Chemicals**, Los Angeles, CA

July 2010 to present

- Manage projects, from scope and budget development to execution in the field for hydrogen, air separation, and chemical plants.
- Projects typically involve pressure vessels and piping, and occasionally machinery.

**Project Engineer**, Western Area Electronics

**Air Products and Chemicals**, Santa Clara, CA

July 2008 to June 2010

- Manage projects for on-site customer bulk gas supply systems, including the installation, maintenance, and upgrading of cryogenic and gas supply systems for the electronics industry.
- Work with technicians and customers to perform repairs and upgrades on bulk systems with minimal down time, while maintaining high purity standards. Includes development of work instructions with technician feedback.
- Trained technicians on the basics of how liquid bulk cryogenic systems operate.
- Studied the feasibility of utilizing solar power at air separation plants based on government and utility incentives.

**Equipment and Project Engineer**, Instrumentation and Equipment Technology

**Air Products and Chemicals**, Allentown, PA

July 2007 to June 2008

- Key member in the mechanical development, review, and fabrication of a xenon gas recovery system for semiconductor fabs, which will result in large profit capability through the recapture of xenon gas. XeCovery is now offered as a product line.
- Developed a cryogenic helium accumulator from concept sketch to working prototype, resulting in satisfactory on time delivery of a new product within the quoted budget.
- Lead mechanical engineer for a sour gas PSA/TSA research unit. In charge of mechanical estimates, project proposal, calculations, and vendor communication, as well as P&ID development and revisions.
- Designed, fabricated, and implemented a nitrogen purge box panel system based on room ventilation requirements, resulting in a reduced chance for an asphyxiation hazard.
- Presented on relief valve basics to the AP Technology community, resulting in better understanding of relief valve operation and the sizing/calculation process.

**CO-OP AND  
INTERNSHIP  
EXPERIENCE**

**Engine Reliability Intern**

**International Truck and Engine Corporation**, Melrose Park, IL

June-August 2006

- Analyzed fleet vehicle data to determine effectiveness of proactive warranty actions in the field
- Designed training kits used to teach dealer service technicians troubleshooting methods to reduce warranty costs

**Co-op Engineer**

**Tenneco**, Grass Lake, MI

May-Aug 2003, Jan-May 2004, and Aug-Dec 2004

- Studied muffler valve response at high temperatures resulted in SAE paper (2006-01-1373) at 2006 World Congress
- Studied pressure distribution of manufacturing processes on catalytic converters
- Performed NVH testing (modal, hanger force) and analysis using LMS equipment
- Performed flow analysis of emission control products, experimental and analytical
- Installed and calibrated strain gauges and accelerometers
- Assisted in calibration, setup, and building of prototype catalytic converters, diesel oxidation catalysts, and diesel particulate filters

**Metallurgical Assistant**

**Federal Mogul Technical Center**, Ann Arbor, MI

May 2001-April 2002

- Prepared samples and performed tests for metallurgical evaluations
- Assisted in production of powdered metals, and strip sintering for development of new alloys

**SKILLS**

- Understanding of cryogenic and high pressure bulk gas systems, as well as high purity systems
- Understanding of the ASME Boiler and Pressure Vessel Code
- Detailed knowledge of pressure relief valve and rupture disc sizing
- Experience in project proposal development, bidding, and quotes, as well as project management and budget tracking
- Communication between engineering and fabricators/vendors
- CAD experience (ProE, CATIA, SolidWorks, AutoCAD, Visio)
- Fabrication skills (welding, machining, mechanical repair)

**ACTIVITIES**

Rock climbing

Hiking and backpacking

Motorcycling – Dirt biking, sport touring

Mountain biking

Photographer ([www.isaacwest.com](http://www.isaacwest.com))

Experience with working on cars (engine swaps, turbocharger installation, suspension)

Purdue Formula SAE Alumni