

# Joel Lentz, MS Mechanical Engineering

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## SUMMARY OF QUALIFICATIONS

- Research knowledge of retrofit technologies on engines
- Root Cause Failure Analysis, Reliability Centered Maintenance, and Condition Monitoring
- Engine fluid flow modeling analysis using Ricardo's WAVE software

## EDUCATION

**M.S. Mechanical Engineering**, December 2005 GPA: 3.45/4.0  
Thesis: "Retrofit Technologies for Large Bore 4 Cycle Natural Gas Engines"  
**B.S. Mechanical Engineering**, May 2003 GPA: 3.1/4.0  
Specialization: Thermodynamics and Material Science  
Colorado State University, Fort Collins, CO

## COMPUTER SKILLS

**Software:** Microsoft Office Suite , MathCAD, Ricardo WAVE, EMPAC, CES, Adobe Acrobat Pro, Adobe Photoshop, CorelDRAW

## RELEVANT EXPERIENCE

### Pioneer Engineering

**Consulting Engineer**, Fort Collins, CO, April 2006 – present

- Reliability Centered Maintenance in a refinery
- Condition monitoring of centrifuges, motors, pumps, and engines
- Research into remote condition monitoring and its application industry
- Turn Around Planning for Critical Equipment within a Refinery

### BP America

**Rotating Equipment Engineer**, Houston, TX, September 2005-April 2006 and June 2003-August 2003

- Worked with Rotating Equipment Availability Network (REAN) to determine critical equipment worldwide within the company.
- Assisted with development of intranet website for rotating equipment documentation
- Worked with assets worldwide to deliver quarterly updates on recommendations for improvements completed by core REAN members
- Member of Pipeline Research Council (PRCI), representative for BP on Natural Gas Engines. Involved in proprietary research for the future development of engines for the natural gas pipeline industry.
- Participated in root cause failure analysis of compressor onsite in Alaska
- Worked as an Intern for Onshore US Business Unit researching strategies for improved fuel consumption across assets. Presented to key members of the company in August 2003 on retrofit technologies and possible improvements across the Business Units
- Traveled to sites across the US evaluating fuel consumption conditions for local units
- Presented research possibilities at BP's New Technology Symposium in Kemah, TX May 2003.
- Presented on new and future technologies at the Rotating Equipment Symposium in London, March 2005

### Colorado State University, Engines and Energy Conversion Laboratory

**Researcher**, Fort Collins, CO August 2000 – August 2005

- Team Leader – Enhanced Mixing Project on Optical Engine
- Team Leader – 4 Stroke High Pressure Fuel Injection on Optical Engine
- Team Leader – Optimized Nozzle Testing on Large Bore Engines
- Involved in laser ignition, combustion gas emission testing, exhaust gas emission testing, and other projects on the large bore engine testbed.

## ACTIVITIES

Partner and Volunteer for the Special Olympics, Summer 2003-Present  
Soccer Coach Under 6 Year Boys, Fort Collins Soccer Club, Fall 2006  
Member of 2003 Clean Snowmobile Challenge Team  
Captain: BP America Corporate Soccer Team, Fall 2005  
Captain of city league football and softball teams Summer, Fall 2006

**References Available Upon Request**