



Materials Engineering Co-op

State of the art materials and chemical laboratory seeks a Materials Engineering Co-op for a 5 to 8 month assignment beginning in January 2014.

At the Charleston, SC facility Bosch designs and produces precision automotive components/systems sold to vehicle and powertrain manufacturers worldwide. Components are produced for gasoline and high pressure diesel injection systems as well as Anti-Lock Braking systems. The laboratory is the Materials Center of Competence for all Bosch plants in North and South America; project work arrives from a variety of sources through all Bosch Corporate divisions (Blaupunkt, Bosch Power Tools, Bosch Home Appliances, Bosch Rexroth, Skil Power Tools, and many more). The Charleston plant currently has 2000 employees in a three-shift, environmentally controlled, state of the art non-union manufacturing plant.

This position provides an enormous opportunity for gaining comprehensive experience with a variety of diverse materials, processes, and testing equipment; including the chance to live in a highly desired location.

Primary Responsibilities:

The primary responsibilities of the selected co-op through the use of analytical test equipment and materials engineering knowledge, will be to support manufacturing, purchasing and research & development activities . The intern will complete failure analysis, identify particle contaminants, release new materials, and special materials investigations. Although the main body of work will center around laboratory and research projects, some additional projects may involve investigations centered around the continuous improvement of heat treat processes and equipment in the Charleston plant.

Typical projects in the Materials and Chemical Lab may include all or some of the following activities:

- Performance of detailed materials failure analysis on defective parts, test samples, and customer return parts; including writing comprehensive reports and communicating the results in a clear, concise manner.
- Materials characterization.
- Frequent in-depth investigation of urgent plant production issues.
- Troubleshooting of broken or down equipment.
- Involvement in laboratory continuous improvement programs to increase laboratory efficiency and technical capabilities including equipment and process development.
- Daily interaction with laboratory technical staff and plant production personnel.
- Materials worked with include: steel, aluminum, copper, ceramics, polymers and elastomers.

The intern may utilize the following equipment during their daily investigations:

- Scanning electron microscope (SEM) & Energy dispersive x-ray spectrometer (EDX)
- Fourier transform infrared spectrometer (FTIR)
- Micro-Beam X-Ray Fluorescence chemical analysis (XRF)
- Thermal analysis (TGA, DSC, DMA)
- Optical and stereo microscopes / Digital imaging / Digital image analysis
- Hardness testers (Rockwell, Automated Vickers, Brinell, IRHD, Shore)
- Metallographic preparation equipment
- Tensile testing equipment (Metals, rubbers, and plastic testing)
- Impact testing equipment (rubbers and plastic testing)
- Optical Emission Spectrometers (GDS and ICP)
- Carbon-Sulfur Determinator and Nitrogen-Oxygen Determinator

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Materials Center of Competence – Technical Engineering Center

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Primary Requirements:

- Must have completed at least one year in a four-year technical degree program.
- Materials Science or Metallurgical Engineering students.
- Excellent written and verbal skills.
- Good communication and analytical skills.
- Excellent computer skills especially with MS Excel, Word, and PowerPoint
- Strong Sense of Teamwork
- Project Leadership
- Self-starter with the ability to function independently

Interested parties may submit resumes to:

Edward Marquardt

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