

Bourdon Tube Gauge Sensor



Team:

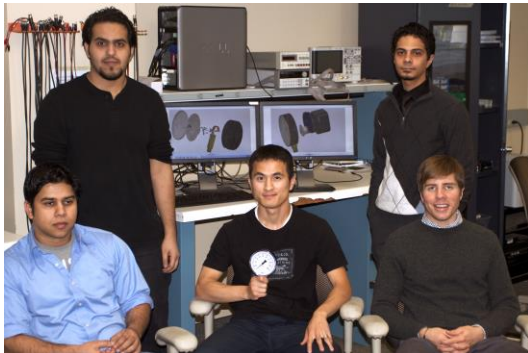
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Project Summary:

Bourdon tube gauges are commonly used worldwide to measure temperature and pressure. The gauges need routine checks by employees to insure safe readings for required pressure or temperature within a facility. A solution is to have a monitoring system for Bourdon tube gauges. This is

accomplished by designing a device that can measure a Bourdon tube gauge.

Design Goal:

Develop a device that can measure the reading for a Bourdon tube gauge. Once an analog signal is acquired, Emerson's wireless technology can deliver this information to a control center. This device needs to be low in power consumption to prolong life cycle of the device. The device also needs to endure environmental conditions similar to those of typical a Bourdon tube gauge.



Design Constraints:

- Design needs to be self-powered.
- Low power consumption by sensor in the device.
- Accuracy of sensing device needs to be within $\pm 5\%$.
- The device should work in outdoor and indoor environments.
- Total cost of components is less than \$50.