EE 492 Weekly Report 2   MAY1627   Week 2 (1/18/16-11/24/16)

Advisors: Randy Geiger   Client: Randy Geiger

Members (roles): Kelly McConville, Xiayang Sun, Yinkun Peng

Project Title: Smart fuel tank sensor

Weekly Summary

For this week, all group members started to prototype the methods. However, each of us found some problems with each method. We did not get the expected results from the three methods.

Meeting notes:

For the load cell method, Yinkun's idea was to measure the output voltage to determine the weight of fuel inside the tank. As the weight of fuel increases, the output voltage will also increase. However, he found that the wire is too slender to plug into the breadboard. Therefore, he couldn't get the output.

For the capacitance method, Kelly planned to put two plates outside the wall of the tank and measure the capacitance to determine the level of fuel inside the tank. However, he found the code for TI micro controller is not quite right. Therefore, he didn't get the proper result.

For thumper method, Xiayang was trying to use Fourier transform to get the result. He used the vibrating motor to vibrate the tank with some constant frequency, and then try to plot the spectrum and find the dominant frequency. However, he didn't get the expected signal output.

Group Meeting with Advisors

Duration: N/A   **Members Present:** N/A

Purpose and Goals: N/A

Achievements: N/A

Pending issues

We still need to figure out the ways to solve the problems.

Plans for next week

For next week we are going to solve the problem and make the prototype work.

Individual Contributions(this week)

Kelly: Tried to prototype capacitor method.
Xiayang: tried prototype the thumper method.
Yinkun: tried to prototype the load cell method.

Total contributions for the project

Each group member focused on one method. They all prototyped their focused method, but not succeeded.