



FATIGUE AND FRICTION RELATED DESIGN PROBLEM

Koloina Rakotomalala¹, Dr Jamil Abdo²

^{1,2}Department of Physics & Engineering, Frostburg State University, 101 Braddock Road,
Frostburg, MD 21532

During LSAMP Summer Research 2020, I focused on studying “Fatigue and Friction related design problem”. In fossil fuel industry, there is technologies that recuperate unusual oil and natural gas. Although, as you might know, drilling is the primary technique for extracting oil and natural gas, but the issue is that it is one of the expensive activities in the industry.

While after analyzing some articles, I was able to start to understand the theory of fatigue and friction, especially in regard to oil and natural gas. There were some calculations performed in the articles, but during this study, my focused was on the experimental setup. I used SolidWorks to redraw a sketch of the experimental setup and loading mechanism. I did a lot of research of how to build each main component that were given. The motor part of the design was the challenging one for me because I only had pictures and measurements of parts from the article. After I finished to build the experimental setup on SolidWorks, I started to do few stress analyses. Unfortunately, I had to stop my study there due to the fact that I am still working on my knowledge on SolidWorks so at the end, I was not able to collect data.

In conclusion, I was not able to do an actual research but most likely studying and understanding the concept of fatigue and friction related design problem. Also, I was able to learn news skills on SolidWorks.

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