Team Second Report

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Flow Visualization
MCEN 4151 – 001

Assistance: Mason Gray, Wesley Caruso, and Jake Lanier.

The purpose of this image was to capture the amazing fluid properties of ferrofluid, a liquid that becomes highly magnetized in the presence of a magnetic field. Our group worked in the basement of the ITLL with flexible magnets purchased from amazon. In the end, the image I chose was ferrofluid covered on top of a bolt found in the prototyping lab.

The magnets the team decided to use were too weak to attract the ferrofluid in a small dish so a screw was chosen as the fluid could rest on top of the point and find its way simply.

Field of view: Narrow
Object to lens distance: 150mm
Focal length: 23.0 mm
Lens: Canon EF-S 18-55mm f/3.5-5.6 IS STM
Camera Type: Canon EOS 80D
Aperture: 4
Shutter Speed: 1/64
Exposure: 1/60
ISO: 800
Exif Image Width: 7500
Post-processing: Photos

During post processing, I did my best with the image at hand, the weak magnetic field provided many challenges during capture. I felt as turning the image into black and white really brought out the contrast in the fluid and metal. Overall, I had a good time with the fluid and a great semester with my team!

References:

Magcraft. “What Is a Ferrofluid?” *Permanent Magnets*, 31 Jan. 2015, www.magcraft.com/blog/what-is-a-ferrofluid.