Annotated Bibliography

ENGR 3510 Project

February 4, 2020

You can add comments with . Make sure to put your initials. It will do weird things to the text; that's fine. Citations are made with [1] where Dolan2016 could be replaced with any citation key.

1. [**Gerontakos2007**] This article studies the affects that vortexes cause on the lift and drag components of different types of wings. This article provides useful information as to what to expect within some force calculations as well as how to prepare the calculations in the first place. For example, there is discussion on the impact of the measured vortexes on Reynolds number calculations. This may prove useful when exploring said calculations in our project. However, this document used some extremely technical language that was hard to follow. Furthermore, many of the discussed results and calculations are methods that are not familiar and therefore harder to follow.

2. [**Portman2009**] This article mostly explained a type of measuring system that helps measure different forces on an object within a wind tunnel. This is done through exploring the applications of said system as well as issues and fixes with the measurements of forces within a wind tunnel. This article provides some useful information into how the forces within a wind tunnel are measured with current devices and what purpose they are measured for. I found section 1 of the article to be most useful with my current knowledge as it was more of an summary versus an in-depth exploration. There was a decent amount of information that I did not understand, however. I did not understand the discussion on anisotropy within the article. It appeared in multiple sections, and I could not understand what it was or what its impact was. There were also some discussions of bridges and signals that I could not follow in relation to the gauges used in some of the systems.

3. [**Motohashi1983**] This article explores the impact and possible correction options for interference caused by the side walls of wind tunnels. This article may prove useful as it discusses locations of greatest interference as well as different tests and adjustments for how to fix, or at least minimize, this interference. The article mentions multiple experiments that attempted different solutions to the interference issue. The downside of this article that made it more difficult to understand was that there were some references made to older tests that were not fully explored and therefore harder to understand. The article also discusses some variables such as flap angle and free stream velocity that I did not understand. because of this, I am not sure if those variables apply to our project or not.

4. [**Nan2013**]

References

[1] Erin L Dolan. "Course-based Undergraduate Research Experiences: Current knowledge and future directions". In: *National Research Council Commissioned Paper* (2016), pp. 1–34. URL: http://sites.nationalacademies.org/cs/groups/dbassesite/documents/webpage/dbasse{_}177288.pdf.

[2] J. Ellis Bell. "A practical guide to course-based undergraduate research experiences." In: (2015). URL: http://home.sandiego.edu/{~}josephprovost/bmb20989-sup-0001-suppinfo01.pdf.