

Meeting Minutes

Course: Honours Engineering Research Project (Leaky Tank Mystery)

Minutes Documented By: Eric Tsoukatos

Meeting No: 11

Date of Meeting: 30/09/2024

Location: Remote/Online

Time: 3:00 pm

1. Attendees

<i>Present</i>	<i>Apologies</i>	<i>Absent</i>
Eric Tsoukatos (ET)	Prof Derek Abbott	
Michael Stefani (MS)		

2. Previous meetings corrections

- No corrections

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3. Meeting Notes, Questions, Decisions, Issues

- **COMSOL Simulation**

- MS and ET have been using COMSOL software to model and simulate the problem
- Simulations of water tanks with differing sizes are to continue
- Continue use of pre-loaded fluid models on COMSOL to use as comparison and validation

- **MATLAB Simulation**

- MS has completed parameter analysis on several different variables
- Graphs of the effect of variables on movement of the tank for each variable has been produced

- **Physical Tank**

- Model of tank is completed, and constructed
- Testing to begin immediately

- **Component Purchasing**

- Extra components requiring purchasing include sheets of acrylic could be required if extra prototypes are to be made.

- **Experimental Method**

- Begin experimental testing of the leaky tank
- This requires the completed prototype that was built, and access to water flow.
- Using a mirror and laser pointer, minute movements can be more accurately measured.

- **Final Report Draft**

- Complete all aspects of final report draft such that Prof Abbott is able to recommend amendments to be made to the document.

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4. Action Items			
<i>Action</i>	<i>Assigned to</i>	<i>Due Date</i>	<i>Status</i>
Complete COMSOL simulations for models of differing size to optimise the ideal size of the equipment to be used	All	10/10/2024	In Progress
Complete using MATLAB and simulate the experiment to illustrate the expected results	All	10/10/2024	In Progress
Produce graphs for analysis of each design parameter	MS	20/09/2024	Completed
Continue gathering any components or necessary apparatus required to simulate the experiment.	All	20/09/2024	Completed
Complete external purchases and filling in of relevant purchase forms.	ET	16/09/2024	Completed
Investigate requirements for laminar flow to be achieved	All	20/09/2024	Completed
Contact Fluid Dynamics lecturer for advice on tank hole design	All	20/09/2024	Completed
Conduct experiment with physical model of leaky tank	All	10/10/2024	New
Work on Final report to be able to get it drafted by Prof. Abbott	All	14/10/2024	In Progress
Final Report Due Date	All	21/10/2024	In Progress