APPENDIX A

Gantt chart

The following Gantt chart is the schedule for this project for the first semester

No.	Detail/ Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Topic Awarded	■													
2	Preliminary Report (Research)		■	■											
3	Submission of Preliminary Report				●										
4	Design process (preliminary design)					■	■	■	■						
5	Submission of progress report								●						
6	Detailed design (mathematical model of hydropower element)									■	■	■			
7	Design and Modeling using CATIA (first draft)											■	■	■	
8	Result gathering												■	■	
9	Submission of Interim Report													●	
10	Oral presentation														●

■ Process ● Suggested milestone

The following Gantt chart is the schedule for this project for the second semester

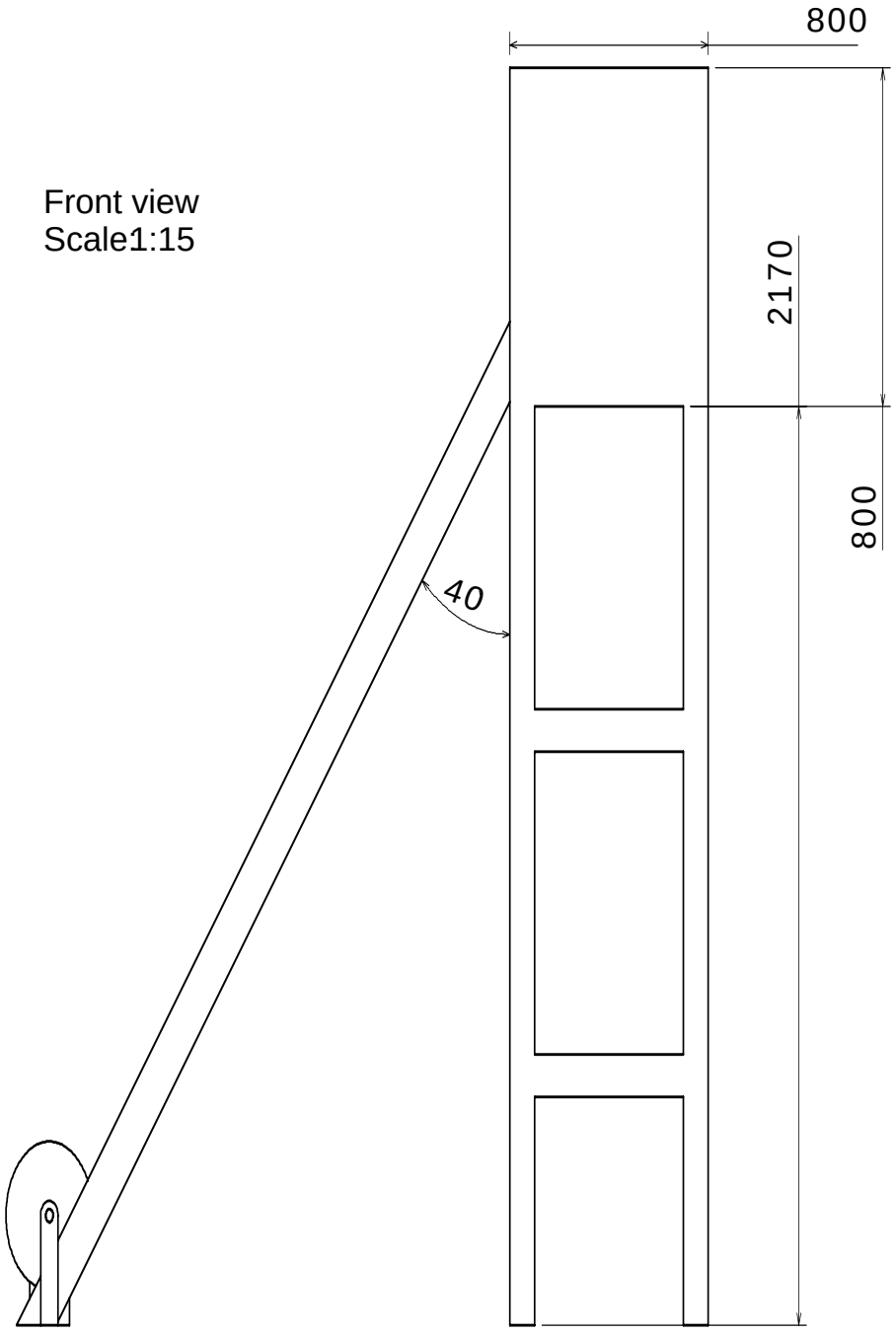
No.	Detail/ Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Detail design (mathematical model of turbine element)	■	■	■	■										
2	Submission of Progress Report I				●										
3	Design and Simulation (CATIA)					■	■	■	■						
4	Submission of Progress Report II								●						
6	Seminar									●					
7	Project work continue									■	■				
8	Poster Exhibition											●			
9	Stress Concentration Analysis (ANSYS)											■	■	■	
10	Submission of Dissertation (softbound)													●	
11	Oral presentation													●	
12	Submission of Dissertation (hard bound)														●

■ Process ● Suggested milestone

APPENDIX B

Pico hydro turbine

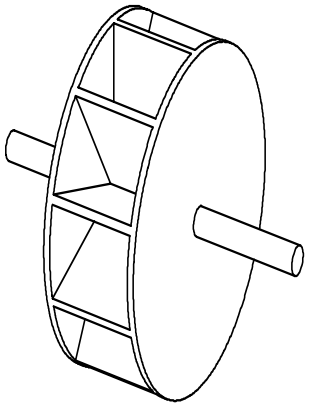
Front view
Scale1:15



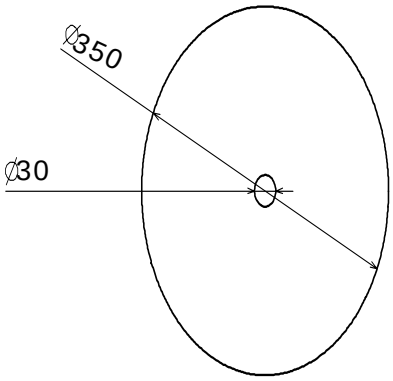
Unit: milimeter (mm)

APPENDIX C

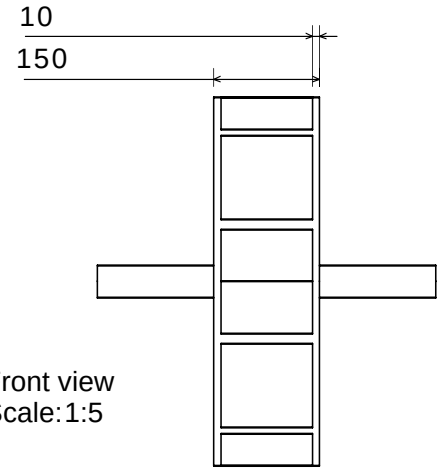
Turbine Wheel



Isometric view
Scale:1:5



Side view
Scale:1:5



Front view
Scale:1:5

Unit: milimeter (mm)