



**RECIRCULATING WATER TUNNEL
(MODELLING AND FABRICATION)**

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ABSTRACT

The recirculating water tunnel is an important equipment to study the performance of a design model. Whereby before an actual size or prototype ship is built a model is made and run through a series of test to ensure the performance of the design ship is up to the requirement. When some problem arises during the test or defect in design is detected the corrective measure can be done on the model it self. By doing test on the model scale using the recirculating water tunnel we can reduce the cost and corrective measure can be done easily.

In designing the water tunnel the most important parameter to be consider is to achieve a steady flow at the test section. In this thesis, the theory of weir crest developed by V. T. Chow¹, which is based on the open channel hydraulic, is being applied. The theory is to get a steady flow after the water free flow from a crest weir.

The usage of the water tunnel is based on the dimensional analysis, which include the dynamic similarity and the geometric similarity. This method is proven to be the suitable method in simulating the actual conditions of ship when using a model.

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