REFURBISHMENT OF A SUBSONIC WIND TUNNEL

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ABSTRACT

The Faculty of Civil Engineering was about to discard an instructional low speed wind tunnel. The tunnel has not been operational for the last five years and the components have been disintegrated and in extremely poor conditions. As the Faculty of Mechanical Engineering is in need of a wind tunnel, initial estimate was conducted to evaluate the cost of purchasing a new wind tunnel against salvaging this tunnel. In this project, the student has assessed the condition of the tunnel, proposed solutions to bring back the tunnel to operational state, supervised the refurbishment of the tunnel, tested the tunnel and conducted aerodynamic experiments to show the tunnel is again useful for instructional purposes. The cost of refurbishing the tunnel is about RM 15,000 as compared to about RM 100, 000 if a new tunnel of similar capability was acquired. The refurbished tunnel was tested and found to be in good working condition.

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