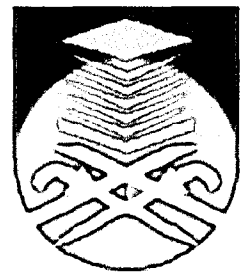

ADJUSTABLE FREE BOUNDARY LAYER FLOOR MECHANISM FOR UiTM AEROSPACE WIND TUNNEL

MOHD ASWADI BIN MOHD RAZALI

(2005371040)

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"I declare that this thesis is the result of my own work except the ideas and summaries which I have clarified their sources. This report has not been accepted for any degree and is not concurrently submitted in candidature of any degree"

Signed: .....

Date : 24/11/09

Mohd Aswadi Bin Mohd Razali

UiTM No: 2005371040

ABSTRACT

This project focuses on design and fabrication of an adjustable free boundary layer floor mechanism for Uitm's Aerospace Wind Tunnel. The devices will be used for wing in ground effect experiment. In order to conduct the actual experiment, the adjustable floor mechanism is needed to act as the ground. The plate must be perfectly flat to make sure no lift is generated by the floor. The plate should be adjustable in terms of height. The aluminum rod thread was used to control movement of the plate. Four legs were used to hold the plate in horizontal position and to withstand force from the air flow. The device has been tested in the UiTM's wind tunnel and could sustain up to 45 m/s of wind speed. This thesis provides discussion through the design process of the model and fabrication of the prototype. A conclusion and recommendation is presented at the end of the report.

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