

**EXPERIMENTAL AERODYNAMICS OF BLENDED WING BODY
(BWB) UNMANNED AERIAL VEHICLE (UAV) WITH ELEVATOR
DEFLECTION OF $+5^{\circ}$ AND -5° USING WIND TUNNEL (MACH
NUMBER 0.1 – 0.15)**


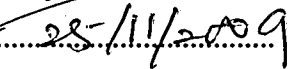
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“I declared that this thesis is the results of my own work except the ideas and summaries which I have clarified their sources. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any degree.”

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ABSTRACT

This thesis presents a study of Aerodynamic of a Blended Wing Body (BWB) unmanned aerial vehicle (UAV) with elevator deflection using wind tunnel test. This project is the continuation of previous research using low speed wind tunnel test and the Computational Fluids Dynamics (CFD) simulation. The study will focus on the aerodynamic characteristics at various angles of attack at 0.1 - 0.15 Mach number using wind tunnel test at Low Subsonic speed. The purpose of this project is to measure the aerodynamic characteristics such as lift coefficient, drag coefficient and pitching moment coefficient of BWB UAV using the wind tunnel test with modified elevator angle at -5 and +5 deflection and also to observe the quality of flow pattern around the BWB UAV at various angles of attack using flow visualization techniques.

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