



**EXPERIMENTAL AERODYNAMICS OF BLENDED WING BODY
(BWB) UNMANNED AERIAL VEHICLE (UAV) WITH ELEVATOR
DEFLECTION OF $+15^{\circ}$ AND -15° USING WIND TUNNEL (MACH
NUMBER 0.1 – 0.15)**

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"I declared that this thesis is the result of my own work except the ideas and summaries which in 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 $+15^{\circ}$ and -15° using wind tunnel. This project is the continuation of previous research using Low Speed Tunnel LST and Computational Fluids Dynamics (CFD) simulation and is very important to validate the result it. This project will present the Analysis of BWB Aerodynamics at low subsonic speed. The study will focus on the aerodynamic characteristics at various angles of attack at 0.1 Mach number using wind tunnel test. The objective of this project is to obtain the aerodynamic characteristics such as lift coefficient, drag coefficient and pitching moment coefficient of Blended Wing Body (BWB) Unmanned Aerial Vehicle (UAV) with elevator deflection $+15^{\circ}$ and -15° using wind tunnel 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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