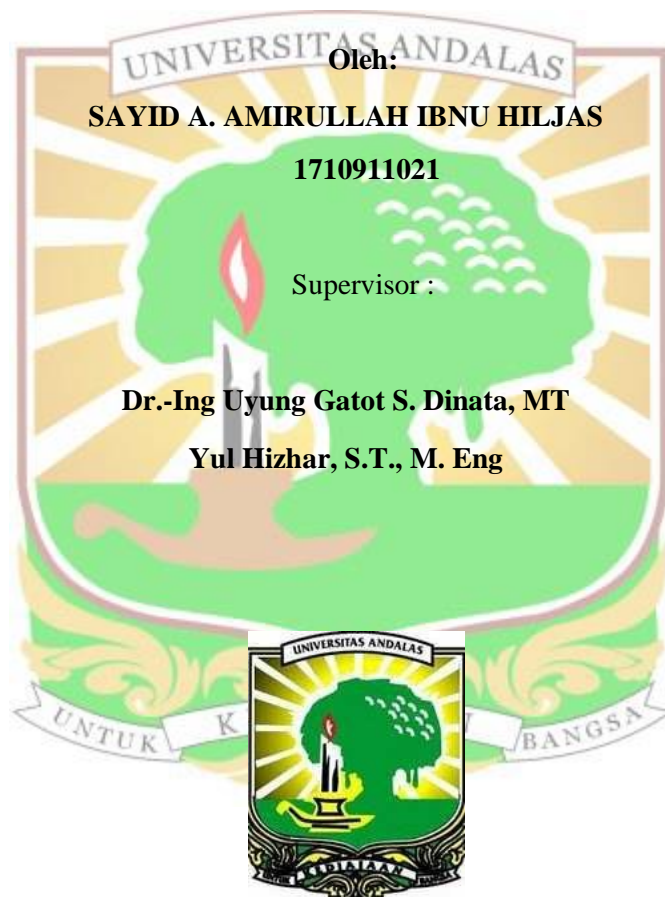


FINAL PROJECT

Development of UAV (Unmanned Aerial Vehicle) Fixed Wing Type by Modifying the Position of the Slat and Slot Wing to the UAV Performance in Maneuvering

*Submitted as One of the Requirements to Accomplish
Bachelor Degree Study*



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ABSTRACT

UAV (Unmanned Aerial Vehicle) or unmanned aircraft are currently widely used for military activities, one of which is a spy plane that is capable of flying at high speed and maneuvering quickly. This maneuverability can be increased by increasing the lift force on the aircraft, one way to increase this lift force is by adding slats and slots on the leading edge of the aircraft wing. This research was conducted to obtain the characteristics of the Gonjong Tujuh AFRG-015 aircraft and use the addition of slats and slots to reduce the maneuver radius so that the maneuver time is shorter. This research was carried out with 3 different modifications to the wing, namely full slat on the wing, root slat on the wing, and tip slat on the wing. This research was first conducted with a wind tunnel using an aircraft model which aims to determine the characteristics of the aircraft, then a flight test was carried out which aims to determine the maneuvering radius of the aircraft before and after the addition of the slats and slots. The data from the wind tunnel test shows a change in the characteristics of the aircraft with slats and slots, namely an increase in the maximum coefficient of lift from an angle of attack of 15° to 25° using a full slat wing. The data from the flight test itself has a difference in the maneuver radius, namely using slats and slots with a full position on the wing, which can reduce the maneuver radius by up to 20%.

Keywords : *Unmanned Aerial Vehicle, Slat and Slot, Maneuver.*

