SIMULATION AND REALIZATION OF MARKER BEACON ANTENNA ON THE AVIATION INSTRUMENT LANDING SYSTEM (ILS) USING VERY HGH FREQUENCY 75MHZ

UNDERGRADUATE THESIS

Prepared in Partial Fulfillment of the requirements for the Bachelor degree of Telecommunication Engineering

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VALIDITY SHEET

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I state that this Undergraduate Thesis is my own original work entitled:

SIMULATION AND REALIZATION OF MARKER BEACON ANTENNA ON THE AVIATION INSTRUMENT LANDING SYSTEM (ILS) USING VERY HGH FREQUENCY 75MHZ

The work in this thesis has not been previously submitted for a degree of diploma at any other higher education institutions. I agree to receive sanction if it is found later that the contents of this thesis violates the academic ethics.

Bandung, 25 Februari 2021

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ABSTRACT

Instrument landing system (ILS) is a series of sub-systems that are useful to facilitate the aircraft to be able to landing on the runway properly. One of these sub systems is Marker beacons. Marker beacons on the Instrument landing system are tools to help landing planes. Aircraft have critical conditions that allow the presentation of accidents to occur and many incidents of aircraft accidents under these conditions. This condition is the take off and landing position.

ILS Marker Beacons are very complex built and integrated with the Radio Altimeter, and Distance measuring equipment (DME) also the real device need a long process of work. Therefore, this thesis simplify the work of the Marker Beacon system without being integrated by the other system so the prototype can be perfectly simulated as the real device in the aircraft. This thesis perform a computer simulation using PROTEUS 8 PROFESSIONAL, and conducting a laboratory experiment using Oscilloscope.

This thesis expects the simulation results to be the same as the workings and systems in the actual marker beacons with near-perfect results of 60% - 90% for which the results are acceptable.

Keywords: *Marker beacon, Instrument landing system,*