DESIGN OF INSPECTION BOAT TO MANGROVE FOREST SURVEILLANCE IN MEDOKAN AYU – WONOREJO ROUND ZONE

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ABSTRACT

East coast mangrove of Surabaya is closed to destruction because of activities to change mangrove areas into earthen dam and settlement. That place have a lot of biological varieties and potency to be developed as ecotourism areas. Preventive ways to safe the existence of mangroves are safe guarding, surveilance and treatment regularly. So far, mangrove safe guarding facilities used by Surabaya government are citizen’s boat rental which one inappropriate for inspection boat.

That’s way need an alternative inspection boat design which is premeditated having operations from Medokan Ayu checkpoint route until a checkpoint in an area in Wonorejo. Main measure planning based on the territorial waters condition and requirements, which is adjusted with compare ship’s data. This ship is planned able to carry plantable mangrove seedling. Ship design process started from ship’s cargo decision, first sketch drawing, linesplan, detention counting, machine power and construction.

Based on waterworks condition, the draught of ship planned 0.4 m height and designed to use 19 degrees deadrise by using outboard machine. Based on the result of design and counting, have plan the main measurement is L= 7.36 meters lenght, B= 2.4 meters breadth, H= 1.1 meters height. And the exchange rate Cb= 0.949 calculated with phoels method from the rate of Vs (speed) as fast as 20 knots designed proper with the ship dination and radius sailing.

Key Words: Inspection boat, mangrove forest, alternative design.