DESIGN OF ROLLING SHIP CONTROL SYSTEM WITH LOAD MOVES USING FUZZY CONTROLLER

By: Purwidi Asri
Student Number Identity: 2208202003
Supervisor: Ir. Katjuk Astrowulan, M.S., E.E.
Co-Supervisor: Ir. Rusdhianto Effendi A.K, M.T.

ABSTRACT

Ship can roll because has ability for upright return caused by influence outside that in ship. Occupant movement gives disturbance in ship stability level. Occupant distribution in roof part in side outside right ship and ship roof will give sloping moment big enough so that can beat moment return ship. When does such process happen continually, so at one time certain ship hasn't has ability again for upright returned.

Movement stability shakies ship is system ability in responsive disturbance to try to return to normal condition. To muffle movement roll used load that can move to watch over ship stability. Ability will muffle towards movement will roll by load will move worn to repair performance system so that the result more gooder and in the end can occupant freshness increase.

Good control system must has endurance towards disturbance and has fast response and accurate. To overcome this matter, applied control system fuzzy.

Final test resulted shows rein fuzzy worknted to help to minimize overshoot. This system design is control system as a whole can produce good system response. This watchfulness is shaped simulation. Algorithm fuzzy implemented in matlab. To make easy simulation is made software by using facilities GUI.

keyword: fuzzy, overshoot, response, stability