

ABSTRACTION

Wisnu Kristianto, 2018, NIT : 51145328. T, “Identification of leakage on condenser plate *fresh water generator* in MV. Energy Prosperity”, diploma IV study program, Politeknik Ilmu Pelayaran Semarang, 1st supervisor : Agus Hendro Waskito, MM 1nd supervisor: Yustina Sapan, S.ST, MM

Fresh water generator is one of the auxiliary machinery that serves to change sea water into fresh water that is through the process of evaporation and condensation. The need for fresh water on board is very important because for the convenience of the crew of the ship and assist the performance of machining that is in the engine room. Fresh water is used as a cooling medium for optimum engine performance.

By evaporating seawater on the evaporator by placing the pressure on the evaporator up to -76 cmHg and then heated with a jacket cooling at 80°C it will convert the liquid to the vapor. Steam hail evaporation is entered into the condenser and there is a change of substance from gas or steam heat to fresh water liquid. The process that takes place inside the condenser is condensate by using seawater that has a temperature of 30°C absorbing heat in hot gas or steam and producing fresh water.

This process is very important and very influential on the performance of fresh air generator auxiliary aircraft. If the ongoing process is inhibited will certainly have an impact on the performance and production of fresh water produced. One factor that can inhibit this process is the state of the plates contained in the condenser or evaporator. From the problems experienced by the authors take the formulation of the problem by looking for factors that cause plate leakage in the fresh water generator condenser using the fishbone diagram method and looking for the impact of leakage and efforts to overcome the leak using the fault tree analysis method.

The results of this study indicate that the leakage of a fresh water generator condenser plate is caused by the buildup of crust and maintenance methods that are not performed optimally

Keywords: *Identification, Plate, Fresh water generator, condenser, MV. Energy Proseperity,*