

## ABSTRACT

**Alexander Edison Alfatur Tanjung**, 2018, NIT: 50134960. T, “*Analysis of Erosion of Impeller on Cargo Oil Pump in MT. Merauke*”, thesis Teknik Study Program, Diploma Program IV, Politeknik Ilmu Pelayaran Semarang, Supervising I: H. Amad Narto, M.Pd, M.Mar.E, Supervising II: Febria Surjaman, M.T.

Impeller is one part of the element of the pump that plays an important role, the function of the impeller is to convert the mechanical energy of the pump into the velocity energy in the liquid which is then pumped continuously. In the pump performance system, the impeller is indispensable because of one of the important component elements as fluid displacement. Impeller in good condition to support the pump works well. Impeller as a supporting component at the pump, very big role in the operation of the pump. Each pump design has specifications in the shape and type of each component. Likewise with impellers, a lot of pump designs put impellers of different types, this is tailored to the main function of supporting pumps to suck and pump liquids. In accordance with the purpose and function of the cargo oil pump system in tankers is as a medium for transfer or dismantling the charge of liquid in the form of oil. In order for cargo oil pump work is not inhibited then the impeller should be in good condition and there is no scraping or cracks. To be able to work maximal then needed care according to instruction book.

The research method that writer use in this thesis preparation is Fishbone and FTA (Fault Tree Analysis) method as data analysis technique to analyze existing problem on erosion of impeller cargo oil pump, that is what factors causing the occurrence of rupture in bearing and what effort is done to overcome the factors of the problem by identifying various factors systematically. The formulation of the problem that the author lift is What causes the pengikikisan on impeller cargo oil pump in MT. Merauke ?. What efforts are being made to cope with the reduced performance of cargo oil pump by the effect of erosion on impeller in MT. Merauke?

Based on the results of research that has been done on the ship MT. Merauke on January 20, 2016 to January 21, 2017 can be concluded that the erosion of impeller on cargo oil pump caused by two factors, namely 1) Occurrence of erosion event. 2) The operating procedure is not working properly. To overcome these factors can be prevented by coating the metal impeller and provide an understanding to the operator about the way the operation and the impact caused due to system failure and make operational standard operating procedures to be viewed and read before the operation process.

**Keywords: Oil Pump Cargo System, Impeller, Component Maintenance.**