

ABSTRACT

Mochamat Rifai, NIT: 51145352.T, 2018 “The occurrence of leakage cooling water on combustion chamber machine carrier in the KM .Umsini ”, script of Engine Department, Program Diploma IV, Merchant Marine Polytechnic Semarang, Supervisor I: H.Sumarno P.S., MM, M.Mar.E, Supervisor II: Andri Yulianto, M.T.

Background of problems is a decrease turning of main engine which was originally 340 rpm to 300 rpm and pressure the exhaust gases no.6 cylinder was decreased into 150 bar , so as to cause not deficient performance of main engine.

The writer have summary of problem and trying to see how solve a problem by uses the fishbone method that is to identify the possible factors causes arising from a problems and fault tree analysis (FTA) is the method that resolve the case of when what is to happen a failure or thing that undesirable by searching then root of basic events problem’s that arise and deciphered from any indication the incident of top event.

There are a lot of common cause the occurrence of leakage cooling water in the combustion chamber of a cylinder No. 6 , from the causes were analysed to figure out main causes. On KM .Umsini happen cooling water was leaking on the combustion chamber of a cylinder No. 6 which it is because the walls of cylinder head was cracked. Due maintenance that were not in accordance and water quality condition cause corrosion on the material of cylinder head. So that cause cracked on cylinder head and cooling water did into the combustion chamber and influence the performance of main engine. To tackle these things based on the research by a writer can be done routinely maintenance , the replacement of spare parts and increase the quality of cooling water.

Keywords: the combustion, cylinder head, cooling water, the performance of main engine.