

ABSTRACT

Riello Nugroho, NIT. 49124525. T, 2016 “*Decrease Performace Analysis of Diesel Generator engine cause cylinder head bolt fracture due in MV.Lieke with Fish Bone Method*”, Diploma IV, Teknika, Semarang Merchant Marine Polytechnic, *Preceptor I*: H.Mustholiq, MM and *Preceptor II*: Budi Joko Raharjo, MM

The diesel engine is an important part of the ship as a driving force, where the smooth operation of a diesel engine is strongly influenced by the optimal treatment outside of the other supporting components. And how to cope when the damage occurred, in order not recur damage so the machine is always in a state of excellent / good in the voyage.

Given the importance of the function of the main engine then have to be treated well, the research methods used by the author is a research method Fault Tree Analysis. Fault Tree Analysis to identify the relationship between a factor and displayed as a fault tree that involves simple logic gates. Logic gate describe conditions that trigger failure, either single or set of conditions from a wide variety of conditions. Using this method will make it easier to complete troubleshooting writer happens to the cylinder head bolts had passed her working hours.

The results obtained from this study showed that, bolt cylinder head which already exceeds the working hours are one cause fracture of the bolt on the cylinder head, the errors on the tool and fitting out of order causing pressure on the current binding is not balanced so that the cylinder head is not installed completely so it will be damaged, nozzle pressure is too high and the timing burning too quickly causing the compression is too big / exceed the capacity of causing the machine to be hot and the performance decreases, O ring watercooling leak and the surface of the block cylinder and cylinder head uneven cause exposed corrosion due jacket cooling leak so that the oil will be mixed with the cooling water, the lack of attention of the installation was not according to the rules, combustion system, cooling jacket, the nozzle causes less than optimal work due to breakage of main engine cylinder head bolts.

Keywords: cylinder head, nozzle, bolt, running hours, fault tree analysis method