

ABSTRACTION

Fatkhurrohman Nur Huda, 2017, NIT : 49124569.T "*Analysis of the plunger jams in the bilge pump* in MT. Fatmawati" *Studies Program Diploma IV, Merchant Marine Polytechnic Semarang*, Supervisor I: Aslang, M.Pd.,M.Mar.E., Supervisor II: Dwi Atmodjo Purnomo, SH., MH.

Bilge pump is an important auxiliary air in the bilge water system in the engine room, serves to pump sewage from the tank to the oily bilge water separator. Bilge pumps including pump types reciprocating (plunger pumps) are widely used for pumping viscous liquids or oil-tainted water. The principle of reciprocating pumps use a plunger or piston is moving from the bottom dead point to the top dead point to suck fluid into and pressed back out of the cylinder. However, when in operation plunger congestion occurs on the bilge pump.

After doing research using the method of fault tree analysis. The cause congestion plunger is shortage of lubricating oil sump tank, damage to seal the liquid cylinder, gear wear out, and press the suction valve closed and an electric motor coil burning. Sump tank shortage of lubricating oil due to leakage caused by gasket is damaged and a hole drain of wear, damage to seals due to the installation that does not center, wheeled gear of wear caused by insufficient lubrication and locking pins broken, the suction valve and the tap is closed due to the filter dirty, coil electric motor stator burns caused by feel, a lack of lubrication in the bearing and stator short order.

Therefore inspection and repair are regularly and systematically on the components of the pump is absolutely necessary to prevent the plunger jams in the bilge pumps and bilge pumps in order to work normally.

Keywords: bilge pumps, reciprocating, plunger, fault tree analysis method