ABSTRACT

Yudha Fahrizal, NIT: 50134860.N, 2018, "*The Analysis of Ballast Lines Leakage Inhibiting the Discharging Process on MV. DK 01*", a Nautical Program final project, Diploma IV program, Merchant Marine Polytechnic of Semarang, First Advisor: Capt. Bharto Ari Raharjo, Second Advisor: Yustina Sapan, S.ST,MM

Ballast system is a system operated on board to maintain the balance of ship position. The system is intended to adjust the trim degree and draught of the vessel as an effect of cargo distribution, so the ship stability can be maintained. Therefore ballast system has a very important role in the discharging process on board. But in the process of operation, the ballast system is not always running well. Sometimes a constraint is encountered resulting in the disturbed discharge of cargo. This situation happened when the writer did the sea project on MV. DK 01, at the port of Tanjung Intan, Cilacap. June 21, 2016.

The research problems found related to the tittle of this mini thesis is; What factors caused the leakage of the ballast lines?, How to solve the leakage of ballast lines inhibiting the discharging proces of cargo on board.

The description of the research object describes the histoty of the MV.DK 01 and the positions of the leak ballast lines installation. In the analysis of the result, there are two factors causing leakage; first is corrosion, including kinds of the corrosion and how to overcome the corrosion. The other one is sediment or blockage in the ballast line, including how it is formed and how to clean it. in terms of handling leakage, it explains the steps done in emeregency situation to overcome the leakage.

From the analysis of observation results and the discussion of problems, it can be concluded that corrosion and sediment in the ballast line are the factors causing leakage of ballast line. The handling done are by patching or repairing, cleaning the inner side of the pipes and giving protective coating. The replacement of improper pipes, sea gratting and maintenance according to Plan Maintenance System (PMS) are considered as preventive methods. From the conclusion above, the suggestion given is to prepare the crew to be more discipline in cleaning hold so the remaining cargo will not cause any corrosion and also to check the condition of hold regularly especially in ballast line pipes where the installation is in hold so if there are any improper pipes, the replacement can be done soon.

Keywords : *Leakage, Ballast, Corrosion*