ABSTRACT

Sulistiono, 2018. NIT: 51145169 N, *"Optimizazion the maintenance of loading and unloading equipment to support the loading and unloading process in the MV. DK 01"*. *Nautical Study Program*, *Diploma IV Program*, *Merchant Marine Polytechnic of Semarang*, *1st Advisor*: Capt. Eko Murdiyanto, M.Pd., M.Mar. *and 2nd Advisor*: H. Sumarno, P.S., MM., M.Mar.E.

Maintenance of loading and unloading equipment is a very important activity carried out on board, this is because the loading and unloading process at the port is very dependent on the condition of the ship loading and unloading equipment. If the loading and unloading equipment can function properly, the loading and unloading activities will run smoothly, but if the loading and unloading equipment is problematic, it will disrupt the loading and unloading activities at the port, therefore maintenance of loading and unloading equipment on board must be carried out optimally.

In this thesis, researchers carry out direct observations of the process of handling the loading and unloading equipment on board the MV. DK 01, and the maintenance of loading and unloading equipment on board is not optimal. To analyze the occurrence of this problem, researchers used 2 data analysis techniques, namely Fishbone Analysis, and Fault Tree Analysis. Fishbone Analysis method researchers use to analyze the factors that can cause less optimal maintenance of loading and unloading equipment on board, and the Fault Tree Analysis (FTA) method researchers use to determine the root cause of the problem by re-analyzing the factors causing the problems that have been obtained from the method Fishbone Analysis so that later solutions will be obtained to optimize maintenance of loading and unloading equipment on MV ships. DK 01.

By carrying out these efforts, it is expected that the maintenance of loading and unloading equipment on board the MV. DK 01 can run well and loading and unloading activities can run smoothly.

Key words *: Maintenance, loading and unloading tools, Fishbone Analysis, Fault Tree Analysis.*