

## ABSTRACTION

**Muhammad Rizky Bimantoro**, 2018, NIT: 50134787 N, "*Optimization of Reliquefaction Plant Operation to Address Problems in the LPG Gas Process on MT Komodo Gas Ship*", Diploma IV, Nautika, Polytechnic of Semarang Sailing Scout, Supervisor I: Dodik Widarbowo, MT, M.Mar and Supervisor II: Ir . Fitri Kensiwi, M.Pd

The transport of LPG on a *fully refrigerated* LPG vessel requires special attention to the problem that is often experienced by high tank pressure. In operation the charge of *fully refrigerated* cargo handling of the temperature and pressure on the load tank is very important, because the factors that cause the loading delay is due to the existence of very high tank pressure, and not optimal *Reliquefaction Plant* to reduce pressure on the load tank, so it is necessary to know how the handling temperature and the pressure on the loading tank in its loading and the constraints that affect it and the effort in overcoming the constraints. As for the literature review as supporting the writing of thesis that the LPG charge at outside air pressure will evaporate at very low temperature that is  $-42.3^{\circ}\text{C}$  for propane and  $-0.5^{\circ}\text{C}$  for butane. Then the temperature and pressure on the load tank must remain in a stable state in keeping the charge in liquid form.

In writing this thesis the author uses descriptive method, qualitative, and data collection by observation by observing directly the object of research, conducting interviews with a number of respondents and supported by the method of documentation. Based on the result of research that in handling less than optimal Operation of *Reliquefaction Plant* at the time of LPG loading process. The obstacles are limited *power generator*, lack of coordination between the ship and the Pertamina operation and high load temperature. As a result the loading time will be longer. So the effort to overcome them is to immediately communicate with Pertamina operation and operate the *ballast* pump before loading to *reliquefaction plant* operate 4 sets and reduce the *loading rate*.

In the end results of research on Optimization of *Reliquefaction Plant* Operation to Handle Problems in LPG Gas Loading Process in MT Ship. Gas Komodo is very important to be done on board for the creation of an objective (facilitating the implementation of *fully refrigerated* LPG loading) and can be accounted for and can be taken a conclusion or as an evaluation for reference

**Key word:** LPG *fully refrigerated*, delays of loading process, temperature and pressure of cargo tanks, loading operation.