

ABSTRACT

Vivin Dwi Novitasari, 2018, NIT: 50134765.N, “*Operation Inert Gas System (IGS) in vessel MT. Galunggung*”, skripsi Nautical Study Program, Diploma IV Program, Politeknik Ilmu Pelayaran Semarang, Counselor I: Dr. Capt. Suwiyadi, M.Pd., M.Mar, Counselor II: H. Suwondo, M.M., Mar.E

The development of maritime world are very rapid nowadays, along with the time and the needs of sea transportation, and improvements of rules or regulations in maritime world especially in the areas of safety of life, pollution, and vessel accidents of sea. Thus, designated only for tanker with DWT 20.000 or beyond must be equipped with fixed Inert Gas System (IGS).

The installation of Inert Gas System in tanker ships are very crucial to prevent fire and explosion in cargo tanks and for safety of life, pollution, and vessel's operational efficiency, as known that the inert gas system also help to fasten load and discharge process because it create positive pressure inside cargo tanks that help the work of cargo pumps.

Methods used by researcher to solve problems are qualitative method, so researcher could explain result of research. Data collected by documentation, observation, and interviews. Researcher observed directly on board MT. Galunggung, researcher directly interview the master and all crews. Researcher take pictures to support the validity of research data as well.

The result of research shows that: There are 3 method of injecting inert gas to exchange atmosphere (gas) in tank, as follows: Inerting, purging, and gas freeing. To exchange atmosphere inside tank there are 2 ways that can be done. Which is: Dillution and Displacement. The operation and maintenance of IGS should be carried of based on proper prochedure guide or manual instruction.

From the result of research can be concluded that the operation of Inert Gas System in MT. Galunggung is not optimal yet due to obstruction in operation and maintenance of the equipment.

Keywords : Operation, Inert Gas System, Vessel