ABSTRACT

Anjang Setya Mahendra, 49124619.T, 2017, "*Working Optimalitation Of Oxygen Dryer On The Nytrogen Generator Pressure Swing Adsorption Plant On MT. Navigator Pluto With HAZOP Methode"*, Diploma IV, Technical, Semarang Merchant Marine Polytechnic, First guide: F. Pambudi Widiatmaka, ST, MT, M.Mar.E and second guide: Budi Joko Raharjo, MM.

Oxygen dryer is one very important part in the IGS PSA plant and the lack of maintenance on the oxygen dryer, especially on the carbon molecular sieves. Oxygen dryer can be defined as a means of separating solid particles (dust) in the air using the carbon molecular sieves as tools. Carbon molecular sieves is molecular filter that is generally used in the drying and bounding oxygen for release nytrogen gas. The problem that often occurs in IGS PSA plant is derived from oxygen adsorption imperfect and cooling system that does not work optimally, causing dew point and high oxygen levels. In general, the carbon molecular sives can be bound micron size particle. Primarily devoded to tankers carrying gas measuring above 20.000 DWT (dead weight tonnage) must be equipped with a fixed inert gas system.

The authors use research method HAZOP by applying the method of assessment of safety based hazardous and operability study (HAZOP), which refers to the safety aspects of crew on board, machinery, and the environment in the operation of machinery IGS PSA plant.

Effort are being made so that oxygen dryer can work optimally is by doing manual drai every 4 hour at once PSA running, reactivation, and inspection of the carbon molecular sieves tank, cooling water pipe and the others part of inert gas system PSA plant as compressore/reffrigerant compressore cooling pump, inert gas room fan blower, and sea chest filter.

Keywords: Optimalitation, oxygen dryer, nitrogen generator (Pressure Swing Adsorption Pant), HAZOP methode, and MT. Navigator Pluto.