TECHNICAL AND ECONOMIC STUDIES OF ESCORT TUG IN LNG TERMINAL: STUDY CASE PT BADAK

Name: Frenky Cahya Nugraha  
NRP: 4110 100 003  
Department: Teknik Perkapalan / Teknologi Kelautan  
Supervisor: Ir. Wasis Dwi Aryawan, M.Sc., Ph.D.

ABSTRACT

PT Badak is a company that focuses in the LNG business. Currently PT Badak LNG want to develop their LNG carrier transportation and operations in the LNG terminal Bontang. PT Badak has plan to buy one escort tug to be used as a substitute of old escort tug. Escort tug will be used in the LNG process, especially in the berthing process of the vessel to and from the pier of PT Badak NGL Bontang. In order to support the procurement of these ships, PT Badak will do further research on the performance and economic value of each tug option as well as the fuel that will be used to operate an escort tug. This study also analyze which way we will choose to procure new building or renting. In this study, data obtained from literature that available in the public domain and then data will be comprised and processed by the authors with engineering judgment in determining the level of interest and the selection of tug using analytical hierarchy process (AHP). After a series of selection using the AHP, the fuel analysis and investment analysis finished. The result show that the type of escort tug that will be used is the rotor tug, the type of fuel that will be used is natural gas, and the chosen procurement is build a new building.