ABSTRACT

"Technical Review of The Conversion from Tanker into FSO
  Case Study: FSO Belida"

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At this time the ship conversions for a particular purpose commonplace. Some of them aim to change the type of cargo ship for cargo to be transported after the conversion is more advantageous than the previous cargo. Another goal is to change the function of the vessel such as tanker conversion became an FPSO or FSO vessel. If the purpose of the FSO vessel is to rent for several years, then it would be more advantageous to use the conversion of the ships used. However, if used for long period of time, would be more profitable if you make a new ship.

In this thesis examines the technical feasibility of Al Mukhtarah Tanker conversion into FSO vessel. Starting from the general arrangement modifications, capacity plan modifications, calculation and analysis of longitudinal strength, stability and safety of the ship. Results of this analysis can provide a technical view of Al Mukhtarah Tanker conversion into FSO vessel does or does not satisfy the technical feasibility for vessel owners.

Modification of the General Arrangement tanker into the FSO vessel has been done according to owner requirements. Modification of the process, found new capacity plan that pass the requirements of ConocoPhillips Indonesia, which can hold 633.754 Barrels of crude oil, and ADO (Automotive Diesel Oil) of 5.342 tons to support operational processes Belida Field in Block B.

From the results of running Hydromax, FSO conversion pass the criteria of IMO on the trim and stability at any condition of loading. While in terms of longitudinal strength, each loading conditions meet the criteria for longitudinal strength BKI well on still water conditions, Hogging and sagging. In terms of structural strength of the tank, based on the results of the analysis software 2010.1 Ship Right Lloyd's Register, the resulting stress is nothing more than acceptance criteria of the Common Structural Rules for Double Hull Oil Tanker at each loading conditions. So it can be concluded, FSO conversion result is in compliance with all safety requirements and requests ConocoPhillips Indonesia to replace the FSO in Belida Field, South of Natuna Block B Production Sharing Contract Area offshore Indonesia.

Keywords: Conversion from Tanker into FSO, FSO Belida.