ABSTRACT

“COMPARATIVE STUDY OF TWO HARBOUR TUG VOITH WATER TRACTOR AND AZIMUTH STERN DRIVE TUG TECHNICALLY AND ECONOMICALLY FOR MUARA KARANG LNG TERMINAL”

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PT Nusantara Regas intends to develop and operate LNG Floating Storage and Regasification Terminal (FSRT) located in Muara Karang, West Java, for supplying gas to Muara Karang and Tanjung Priok Power Plant. In order to support shiphandling (berthing and unberthing), it is necessary to provide harbour tugs to escort the trading LNG vessel approaching the floating debris storage regasification unit (FSRU). This final project presents a comparative study of Azimuth Stern Drive (ASD) and Voith Water Tractor (VWT) for Muara Karang LNG Terminal. The final project mainly based on the literature survey that available data in public domain, after each of kriteria was compared then it is processed by Analytic Hierarchy Process (AHP) method using engineering judgement to rate of importance. The results show that VWT is more preferrable than ASD when performance becomes main aspect which is weight such as 40,1% for ASD and 59,9% for VWT. However ASD is better choice than VWT if economics becomes main aspect ASD which weight of each tug is 51,6 for ASD and 48,4 for VWT.

Keywords: Comparative, Harbour Tug; Voith Water Tractor; Azimuth Stern Drive; Analytic Hierarchy Process.