DETAILED DESIGN OF 30.000 DWT LNG JETTY ON THE NORTHERN SEA OF TUBAN REGENCY

Name : Niko Puspawardana
NRP : 3109 100 111
Department : Civil Engineering FTSP ITS
Supervisor : Ir Dyah Iriani W., M.sc, Cahya Buana, ST, MT

Abstract

The existence of LNG these days is very demanded as a fuel for electricity generator, refinery fuel, industrial material, household fuel, and transportation fuel especially in Indonesia. But this condition is not supported with the existing infrastructure such as receiving terminal. On the other hand the demand for LNG domestically is also increasing particularly to meet the gas distribution or LPG especially in East Java Island.

On the northern coastal area of Tuban Regency there is a certain company that works in the processing of LNG but some part of their area haven’t been used to the maximum potential. Therefore they are trying to increase the production capacity of LNG processing by building an infrastructure in an unused land to meet the gas distribution or LPG in East Java Island to be distributed evenly. By planning to build an infrastructure it is hoped that the development processes won’t disturb the internal activity on the LNG port because the construction of LNG port requires a special treatment due to its easily flammable nature and the potential to make the steel brittle.

This final project is intended to evaluate the sea and land layout that is capable to serve the demand of LNG
port, as the impact of inaccurate design on the existing condition of breakwater, the calculation of detailed structure, the construction method and the construction cost for the LNG jetty.

From the result of the analysis it is known that the specification for jetty with are an Unloading Platform as big as 31 x 21 m², 6 x 6 m² Mooring Dolphin, a 7.5 x 6 m² Breasting Dolphin and a 762 x 6 m² Catwalk. The construction cost needed is Rp 109,592,004,549,-.