

**EVALUASI PERHITUNGAN TURAP DAN DESAIN *JETTY*
PADA PETROSEA SUPPORT FACILITIES
KARIANGAU – BALIKPAPAN**

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INTISARI

Pada Petrosea Support Facilities dibutuhkan fasilitas *jetty* sebagai penghubung jalur air dan darat dalam proses pendistribusian alat berat. *Jetty* direncanakan menggunakan turap baja. Hal tersebut berdasarkan pertimbangan segi efisiensi dan ekonomis pelaksanaan di lapangan.

Dalam perhitungan dan analisis dibutuhkan data-data teknis seperti data kapal, data tanah, data arus, data angin, data pasang surut dan data batimetri. Data-data tersebut diolah untuk dapat mengetahui gaya-gaya yang bekerja pada turap sehingga didapatkan dimensi dan profil turap yang aman digunakan untuk struktur *jetty*.

Berdasarkan hasil perhitungan dan analisis menggunakan *software* GEO5, dibutuhkan profil turap baja WOM/WOF diameter 900 mm dengan ketebalan 20 mm dan kedalaman turap 31,26 m. Hal tersebut akan sulit dalam proses instalasi di lapangan meninjau profil baja yang cukup besar, dan profil tidak dapat diaplikasikan karena berdasarkan hasil pengujian tanah bahwa kedalaman tanah keras berada pada kedalaman 10 m. Profil dapat diganti dengan *combi-pile* sehingga akan lebih ekonomis dan efisien.

Kata Kunci : *Jetty*, Turap, Perhitungan, Analisis, GEO5, Profil.

***EVALUATION OF SHEETPILE CALCULATION AND JETTY DESIGN
AT PETROSEA SUPPORT FACILITIES
KARIANGAU – BALIKPAPAN***

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ABSTRACT

Petrosea Support Facilities needs a jetty as a connector between lands and water ways in order to distribute its heavy equipments. Sheetpile will be used for the jetty. It is based on perspective of economic and efficiency cost when it is applied at the site.

Some technical data are needed in order to calculate and analysis such as vessel, soil, wind, current, tidal and bathymetry data. These data will be calculated to get the safe dimension and profile of sheetpile structure by knowing forces that acted on sheetpile.

Based on calculation and analysis using GEO5 software, the result shows that the available sheetpile profile is WOM/WOF with 900 mm of diameter and 20 mm of thickness and it is has 31,26 m of depth. Because of its very big profile, the installation process will be difficult and consider with the soil test investigation it is can not apply because of the hard layer of soil exist at 10 m of depth. By change the profile we may found some problem solver. Combi-pile may available for its condition for more economic and efficient cost.

Keyword : Jetty, Sheetpile, Calculation, Analysis, GEO5, Profile.