

ABSTRACT

STRUCTURE ANALYSIS OF Wharf Development (CASE STUDY: PONDOK DAYUNG Wharf)

Faizal Dwi Prasetyo

NPM : 2112181024

Dr. Ir. M. Ryanto, MT

Ir. Adriadi, ST., MT., Ph. D

At the port there is a dock building used to dock and moor ships that load and unload goods and board and disembark passengers. In selecting the type of dock based on the type of ship, ship size, topographic conditions, hydro-oceanographic conditions. In the construction of the Pondok Rowing Military, the Sunda Pier uses the Deck On Pile structure type. The purpose of this study is to calculate the characteristics of the loads acting on the pier structural elements and the pier structural elements against the loads that work. The research method used is soil test, sondir, and data analysis in determining the strength of the foundation structure using SAP 2000 software. The results of the vibration period analysis with mode 1 are 0.451 seconds, the results of the displacement analysis with a span of 5 meters do not exceed the allowable deflection, the results of the maximum moment analysis are 82009.78 kg.m, the results of the maximum axial force analysis are 337887.14 kg.m, the results of the maximum X-direction shear force analysis are 88074.21 kgf, the results of the maximum Y-direction shear force analysis are 20525.88 kgf. So, from the results of the analysis of the deck on pile structure on the pile foundation for the construction of the Pondok Rowing Military, Sunda Pier based on SNI 2847-2019 and SAP 2000 analysis.

Keywords: Deck on pile, Pile, Piling

KATA PENGANTAR

Assalamu'alaikum Warahmatullaahi Wabarakaatu.

Alhamdulillah, puji dan syukur saya panjatkan kehadiran Allah SWT, karena berkat rahmat dan karunianya saya dapat menyelesaikan laporan topik khusus dengan judul

"ANALISA STRUKTUR DERMAGA

(STUDI KASUS: DERMAGA PONDOK DAYUNG JAKARTA)"

Laporan ini dibuat untuk memenuhi syarat akademis dalam menyelesaikan pendidikan tingkat sarjana (Strata - I) teknik sipil Universitas Sangga Buana YPKP Bandung. Sadar akan keterbatasan ilmu dan kemampuan yang penulis miliki, penulisan laporan ini masih jauh dari kata sempurna dan memiliki banyak kekurangan. Oleh karena itu kepada semua pihak yang terkait dalam penyusunan laporan topik khusus ini, yang telah memberikan bimbingan, arahan, serta dukungan penulis mengucapkan Jazakumullah Khairan Katshiran.

1. Dr. Didin Saepudin, SE., M.Si ; Selaku Rektor Universitas Sangga Buana YPKP - Bandung.
2. Dr. Teguh Nurhadi Suharno, ST., M.T ; Selaku Wakil Rektor I Universitas Sangga Buana YPKP - Bandung.
3. Bambang Susanto, SE., M.Si ; Selaku Wakil Rektor II Universitas Sangga Buana YPKP - Bandung.
4. Nurhaeni Sikki, S.AP., M.AP ; Selaku Wakil Rektor III Universitas Sangga Buana YPKP - Bandung.
5. Slamet Risnanto, ST., M.Kom ; Selaku Dekan Fakultas Teknik Universitas Sangga Buana YPKP - Bandung.
6. Muhammad Syukri, ST., MT, selaku Ketua Program Studi Teknik Sipil Universitas Sangga Buana YPKP – Bandung.
7. Ir. M. Ryanto, MT Selaku Dosen Pembimbing I analisa Struktur Teknik Sipil Universitas Sangga Buana YPKP-Bandung.