

ABSTRAK

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Judul Skripsi : Analisis Daya Dukung Fondasi Bored Pile (Studi Kasus Stasiun Indonesia Jakarta – Bandung High Speed Railway Karawang)
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Fondasi sebagai bagian dasar dari sebuah bangunan harus kuat dan kokoh, sebab fondasi akan menopang beban bangunan itu sendiri dan beban lainnya yang akan disalurkan ke lapisan tanah pada kedalaman tertentu. Fondasi bored pile merupakan fondasi yang dipakai pada proyek pembangunan Stasiun High Speed Railway Karawang. Oleh karena itu diperlukan adanya analisis mengenai daya dukung bored pile tersebut untuk mengetahui berapa besar nilai daya dukung yang tepat agar bangunan di atasnya dapat berdiri dengan kokoh.

Pada penelitian kali ini penulis menganalisis daya dukung tiang tunggal berdasarkan data Boring Log (SPT) yang nantinya akan dihitung menggunakan metode Meyerhof dan metode Reese & Wright. Analisis daya dukung berdasarkan data static loading test yang diinterpretasikan menggunakan metode Davisson dan metode Mazurkiewicz.

Hasil dari perhitungan daya dukung tiang tunggal fondasi bored pile pada proyek Stasiun High Speed Railway Karawang, berdasarkan data boring log (SPT) menggunakan metode Meyerhof, didapat nilai daya dukung rata-rata sebesar 674,30 ton, menggunakan metode Reese & Wright didapat nilai daya dukung rata-rata sebesar 713,70 ton. Hasil analisis daya dukung tiang kelompok dari ketiga metode yaitu Los Angeles, Converse-Labarre, dan Seiler-Keeney, pada PC18C (BH-1) didapat nilai rata-rata sebesar 1329,41 ton, pada PC13C (BH-2) didapat nilai rata-rata sebesar 1344,36 ton, pada PC2D (BH-4) didapat nilai rata-rata sebesar 2611,48 ton. Berdasarkan data statik loading test menggunakan metode Davisson didapat daya dukung rata-rata sebesar 594,48 ton dan metode Mazurkiewicz rata-rata sebesar 533,19 ton. Daya dukung hasil PDA test didapat nilai rata-rata sebesar 673,65 ton.

Kata Kunci: *Fondasi Bored Pile, Daya Dukung, NSPT, Statik Loading Test*

ABSTRACT

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The foundation as the basic part of a building must be strong and sturdy, because the foundation will support the weight of the building itself and other loads which will be distributed to the soil layer at a certain depth. The bored pile foundation is the foundation used in the Karawang High Speed Railway Station construction project. Therefore, it is necessary to conduct an analysis of the bored pile's bearing capacity to find out the correct bearing capacity value so that the building above it can stand firmly.

In this research, the author analyzes the bearing capacity of a single pile based on Boring Log (SPT) data which will later be calculated using the Meyerhof method and the Reese & Wright method. Bearing capacity analysis is based on static loading test data which is interpreted using the Davisson method and the Mazurkiewicz method.

The results of the calculation of the bearing capacity of a single bored pile foundation at the Karawang High Speed Railway Station project, based on boring log (SPT) data using the Meyerhof method, the average bearing capacity value is 674,30 tons, using the Reese & Wright method the average bearing capacity value is 713,70 tons. The results of the analysis of the bearing capacity of group piles from the three methods, namely Los Angeles, Converse-Labarre, and Seiler-Keeney, on PC18C (BH-1) obtained an average value of 1329,41 tons, on PC13C (BH-2) obtained an average value of the average value is 1344,36 tons, in PC2D (BH-4) the average value is 2611,48 tons. Based on static loading test data using the Davisson method, the average bearing capacity value is 594,48 tons and the Mazurkiewicz method, the average bearing capacity value is 533,19 tons. The average bearing capacity value of the PDA test results is 673,65 tons.

Keywords: Bored Pile Foundations, Bearing Capacity, NSPT, Static Loading Test