

ABSTRAK

Pembangunan infrastruktur di Indonesia berupa gedung-gedung pencakar langit sangatlah pesat. Dalam pembangunan konstruksi sipil diperlukan perencanaan struktur yang baik. Perencanaan struktur dapat berupa struktur atas berupa bangunan dan struktur bawah berupa fondasi. Untuk gedung-gedung pencakar langit (tinggi) maka digunakan fondasi dalam berupa fondasi tiang.

Analisis kapasitas daya dukung tiang pancang menggunakan formula dinamis metode Wijaya Karya (Wika).

Dalam Metode Wijaya Karya (Wika) faktor-faktor yang mempengaruhi dalam menghitung kapasitas daya dukung tiang adalah berat palu/hammer, berat tiang pancang, tinggi jatuh palu/hammer, penetrasi tiang (final set) terakhir, nilai rebound pukulan, kondisi alat (koefisien restitusi). Hasil analisis tiang pancang beton diameter 40 cm dan kedalaman 42 m berdasarkan formula dinamis Metode Wijaya Karya (Wika) didapat kapasitas daya dukung tiang pancang ultimate maksimum sebesar 459.375 ton dan minimum sebesar 334.091.

Kata Kunci : fondasi tiang, tiang pancang, metode Wijaya Karya (Wika), kapasitas daya dukung

ABSTRACT

Infrastructure development in Indonesia in the form of skyscrapers is very rapid. In the construction of civil construction, good structural planning is required. Structural planning can be in the form of an upper structure in the form of a building and a lower structure in the form of a foundation. For skyscrapers (tall) the foundation is used in the form of a pile foundation.

Analysis of the bearing capacity of piles using the dynamic formula of the Wijaya Karya (Wika) method.

In the Wijaya Karya (Wika) method, the factors that influence in calculating the bearing capacity of the pile are the weight of the hammer/hammer, the weight of the pile, the height of the hammer/hammer drop, the last pile penetration (final set), the rebound value of the blow, the condition of the tool (coefficient of impact). restitution). The results of the analysis of concrete piles with a diameter of 40 cm and a depth of 42 m based on the dynamic formula of the Wijaya Karya (Wika) method, the maximum carrying capacity of the ultimate pile is 459,375 tons and a minimum of 334,091.

Key Words : pile foundation, pile, Wijaya Karya (Wika) method, bearing capacity