

ABSTRAK

Penelitian ini mengevaluasi kapasitas daya dukung pondasi bored pile pada pembangunan jembatan di Bunga Pariama, Desa Suka Makmur, Kecamatan Kutalimbaru, dengan menggunakan data Standard Penetration Test (SPT). Analisis dilakukan pada bored pile berdiameter 0,8 m dan panjang 22 m melalui dua pendekatan, yaitu metode Reese & Wright serta metode Meyerhof. Perhitungan mencakup daya dukung ujung, daya dukung selimut, kapasitas ultimit, kapasitas izin, dan penurunan tiang. Hasil penelitian menunjukkan bahwa metode Reese & Wright menghasilkan daya dukung ultimit sebesar 7909,09 kN dan daya dukung izin 3954,53 kN, sedangkan metode Meyerhof memberikan daya dukung ultimit 6530,20 kN dan daya dukung izin 3265,10 kN. Penurunan tiang yang diperoleh sangat kecil, yakni 0,01244 m pada metode Reese & Wright dan 0,01691 m pada metode Meyerhof, jauh di bawah batas penurunan yang diizinkan untuk diameter tiang 0,8 m. Secara keseluruhan, bored pile dengan dimensi tersebut dinyatakan aman terhadap beban rencana dan sesuai digunakan sebagai pondasi jembatan pada lokasi penelitian. Metode Reese & Wright memberikan kapasitas dukung lebih besar dan menunjukkan kecocokan yang lebih baik dengan karakteristik tanah berdasarkan data SPT.

Kata kunci: bored pile, SPT, daya dukung

ABSTRACT

This study evaluated the carrying capacity of bored pile foundations in the construction of bridges in Bunga Pariama, Suka Makmur Village, Kutalimbaru District, using Standard Penetration Test (SPT) data. The analysis was carried out on a bored pile with a diameter of 0.8 m and a length of 22 m through two approaches, namely the Reese & Wright method and the Meyerhof method. The calculation includes the end bearing capacity, the blanket bearing capacity, the ultimate capacity, the clearance capacity, and the mast lowering. The results showed that the Reese & Wright method produced an ultimate bearing capacity of 7909.09 kN and a permit carrying capacity of 3954.53 kN, while the Meyerhof method provided an ultimate carrying capacity of 6530.20 kN and a permit carrying capacity of 3265.10 kN. The beam drop obtained was very small, namely 0.01244 m in the Reese & Wright method and 0.01691 m in the Meyerhof method, well below the allowable drop limit for the 0.8 m beam diameter. Overall, the bored pile with these dimensions was declared safe against the load of the plan and suitable for use as a bridge foundation at the study site. The Reese & Wright method provides greater support capacity and shows a better match with the soil characteristics based on the tax return data.

Keywords: *bored pile, SPT, carrying capacity*