

ABSTRAK

Perhitungan daya dukung pondasi tiang bor menggunakan beberapa metode, yaitu untuk perhitungan daya dukung ujung tiang tanah kohesif, daya dukung selimut tian tanah kohesif dan non kohesif menggunakan metode Meyerhof (1976), metode Reese and Wright (1977), dan metode O'neil dan Reese (1989) , Alpha, dan metode Coyle dan Castello.

Hasil perhitungan daya dukung tiang tunggal (Qall) berdasarkan data NSPT dengan menggunakan beberapa metode pada keadaan tanah B3 Tower B secara berurutan menurut yaitu metode Meyerhof (1976) di dapat daya dukung 248,269 ton, metode Reese & Wright (1977) sebesar 281,909 ton dan menurut metode O'neil dan Reese (1989) didapat hasil daya dukung sebesar 268,727 ton.

Untuk perhitungan pada tanah B6 menunjukan hasil sebagai berikut: perhitungan metode Meyerhof (1976) 241,125 ton, metode Reese & Wright (1977) sebesar 226,124 ton, sedangkan untuk metode O'neil dan Reese (1989) sebesar 231,416 ton.

Dalam keadaan tiang kelompok, pada tanah yang sama dengan perhitungan pada tiang P3 dengan beban rencana sebesar 5758 ton (hasil perhitungan SAP 2000) didapat hasil perhitungan dengan masing-masing metode yaitu Meyerhof (1976) sebesar 1243,083 ton, Reese & wright (1977) sebesar 1469,541 ton, serta O'neil dan Reese sebesar 1483,693 ton.

MERCU BUANA

Hasil rata-rata dari beberapa metode tersebut bisa disimpulkan bahwa settelmen menggunakan metode Vesic (1977) tiang tunggal yaitu : 11,55 mm dan 14,60 mm, tiang kelompok yaitu 23,30 mm dan 14,6 mm, memenuhi persyaratan yang telah ditentukan yaitu ≤ 25 mm.

Kata Kunci : Metode, Daya dukung ujung, Daya dukung selimut tiang, Settlemen, Meyerhof (1976), Reese and Wright (1977), O'neil dan Reese (1989), Alpha, Coyle dan Castelo.

ABSTRACT

Calculation of bearing pile foundation carrying capacity uses several methods, namely for the calculation of cohesive pile end bearing carrying capacity, cohesive and non cohesive soil blanket carrying capacity using the Meyerhof method (1976), Reese and Wright (1977), and O'neil's method and Reese (1989), Alpha, and the Coyle and Castello methods.

The results of calculation of single pole carrying capacity (Qall) based on NSPT data using several methods on Tower B3 B3 soil conditions in sequence according to the Meyerhof method (1976) in carrying capacity 248,269 tons, Reese & Wright (1977) method of 281,909 tons and according O'neil's and Reese's (1989) method obtained results of carrying capacity of 268,727 tons.

The calculation for B6 soil shows the following results: calculation of Meyerhof (1976) method 241.125 tons, Reese & Wright (1977) method of 226.124 tons, while for O'neil and Reese (1989) method it was 231.416 tons.

In the group pole condition, on the same ground as calculated on P3 pole with a planned load of 5758 tons (SAP 2000 calculation results), the calculation results with each method, Meyerhof (1976), were 1243.083 tons, Reese & wright (1977). amounting to 1469.541 tons, and O'neil and Reese of 1483.693 tons.

The average results of several methods can be concluded that settling uses the Vesic (1977) method of a single pole, namely: 11.55 mm and 14.60 mm, group poles of 23.30 mm and 14.6 mm, fulfilling predetermined requirements that is ≤ 25 mm.

Keywords: Methods, End bearing capacity, Carrying capacity of pole blankets, Settlement, Meyerhof (1976), Reese and Wright (1977), O'neil and Reese (1989), Alpha, Coyle and Castelo