

PERHITUNGAN KAPASITAS DAYA DUKUNG TIANG *BORE PILE* PADA KONSTRUKSI *MASS RAPID TRANSIT* JAKARTA PAKET KONTRAK 101

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INTISARI

Pondasi *bore pile* adalah pondasi yang pengerjaannya dengan cara mengebor tanah sampai kedalaman tertentu lalu dicor. Pelaksanaan pondasi *bore pile* harus dilaksanakan dengan cermat karena pelaksanaan berpengaruh dengan kapasitas yang dapat didukung oleh pondasi. Kapasitas dukung pondasi dapat diketahui dengan uji lapangan (*Pile Driving Analyzer*, PDA) dan/atau perhitungan manual. Penelitian ini bertujuan untuk mengetahui pelaksanaan pondasi *bore pile* dan perbandingan nilai kapasitas dukung tiang menggunakan perhitungan manual (metode Meyerhoff, L. Decourt) serta hasil tes PDA. Kapasitas dukung tiang tunggal menurut metode Meyerhoff, L. Decourt dan tes PDA masing-masing adalah 9927,87 KN, 10392,27 KN dan 14960 KN. Metode L. Decourt lebih mendekati hasil tes PDA karena jenis tanah dilokasi studi berupa tanah kohesif bercampur pasir dan krikil. Pelaksanaan SOP pondasi *bore pile* perlu disesuaikan dengan keadaan lapangan.

Kata kunci : pondasi *bore pile*, tes PDA, kapasitas dukung tiang.

CALCULATION OF PILE BEARING CAPACITY IN MASS RAPID TRANSIT JAKARTA CONSTRUCTION CONTRACT PACKAGES 101

ABSTRACT

Bore pile foundation is a foundation which is built by drilling the ground until reaching the specific depth, then cemented. The execution of bore pile foundation must be carried out carefully because it influences the capacity which is supported by foundation. Foundation supporting capacity can be identified by the field test (Pile Driving Analyzer, PDA) and/or manual calculation. This study aims to know the execution of bored pile foundation and the comparison of capacity value of pile by using a manual calculation (Meyerhoff method, L. Decourt method) as well as PDA test. Pile supporting capacity based on Meyerhoff method, L. Decourt method and PDA test are 9927,87 KN, 10392,27 KN dan 14960 KN. L. Decourt method is close to the result of PDA test due to the type of soil in study location is cohesive soil mixed with sand and gravel. The SOP implementation of bore pile foundation needs to be adjusted to the field conditions.

Keyword : bore pile foundation, PDA test, pile bearing capacity.