

Shaft Friction of Bored Pile Socketed in Weathered Limestone in Qatar

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Abstract : Socketing of bored piles in rock is always seen as a matter of debate on construction sites between consultants and contractors. The socketing depth normally depends on the type of rock, depth at which the rock is available below the pile cap and load carrying capacity of the pile. In this paper, the review of field load test data of drilled shaft socketed in weathered limestone conducted using conventional static pile load test and dynamic pile load test was made to evaluate a unit shaft friction for the bored piles socketed in weathered limestone (weak rock). The borehole drilling data were also reviewed in conjunction with the pile test result. In addition, the back-calculated unit shaft friction was reviewed against various empirical methods for bored piles socketed in weak rock. The paper concludes with an estimated ultimate unit shaft friction from the case study in Qatar for preliminary design.

Keywords : piled foundation, weathered limestone, shaft friction, rock socket, pile load test

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