

Dissertation abstract

**Analysis of skin friction mobilization of pile in cohesionless soil, based on
laboratory model research**

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Transfer of axial force from the head of a pile to the surrounding soil by skin friction and base resistance is still uncertain. Field research confirms that in operation conditions skin friction is greater than base resistance. Therefore, determining the appropriate skin friction is so important. The way of skin and base resistance mobilization is often differ. The results of static pile load test are usually presented as settlement curve. This curve can be divided into two components: skin friction curve and base resistance curve according to the settlement. In this dissertation, laboratory research of model pile was presented. The research involved measuring base resistance during static pile load test. Findings allowed to determine skin friction following settlement of the pile. The outcomes were approximated using Meyer-Kowalow (M-K) method. The relationship between obtained parameters of M-K approximation was carried out. In the analysis there were also used results of field tests which were found in literature. The analysis confirmed thesis of the dissertation that it is possible to determine the skin friction mobilization following the settlement of the pile based on the static pile load test.

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