**A case study of piling project and testing in Poland**

**ABSTRACT:**

This paper presents a case study of piling project and testing of a huge Commercial Centre in the south-western region of Poland. The overall pile driving works involved more than 2500 RC piles of a total length over 33 000 m. Assumption that the bearing capacity of a pile driven into cohesive soil may increase significantly in time (set-up effect), was the reason for the contractor to take the risk to accelerate the testing procedure. Usually, when the load test result indicates insufficient bearing capacity, the testing procedure may be repeated after a period required by the codes of practice. The possible later increase of pile bearing capacity adds up to additional safety margin for the design.

In the case of sandy soils, reported by Jardine et al (2006) values of capacity increase amounting to app. 20% do not affect much pile bearing capacity and the design procedure. It is important to state that some authors have observed an opposite effect called relaxation, which can appear in silty soil. The authors of the paper, however, have never noticed this effect. On the contrary, the numerous static and dynamic testing of foundation piles designed for Auchan Commercial Centre in Raciborz (Poland) have proved a significant time-dependent increase of bearing capacity of piles driven in silt (reaching app. 67%).

**Keywords:** pile load test, set-up