

## **A Comparison between Russian and Western Approach for Deep Foundation Design**

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**Abstract :** Varying methodologies are considered for pile design for both Russian and Western approaches. Although both approaches rely on toe and side frictional resistances, different calculation methods are proposed to estimate pile capacity. The Western approach relies on compactness (internal friction angle) of soil for cohesionless soils and undrained shear strength for cohesive soils. The Russian approach relies on grain size for cohesionless soils and liquidity index for cohesive soils. Though most recommended methods in the Western approaches are relatively simple methods to predict pile settlement, the Russian approach provides a detailed method to estimate single pile and pile group settlement. Details to calculate pile axial capacity and settlement using the Russian and Western approaches are discussed and compared against field test results.

**Keywords :** pile capacity, pile settlement, Russian approach, western approach

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