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(57) Abstract :
The present disclosure relates to a method for designing foundations of industrial structures and structures subjected to dynamic loads. Coefficient of elastic uniform compression (Cu) of soil, used in the determination of soil spring stiffness for design of foundations of industrial structures and structures subjected to dynamic loads, is generally determined from cyclic plate load tests. The values of Cu determined with respect to test plate size are corrected for actual foundation size based on Barkan™s equation. The effect of shape of loading plate on Cu is studied in cohesionless and cohesive soils through small scale cyclic load tests conducted in the laboratory using square and circular loading plates of same size. The results of study revealed that the value of coefficient of elastic uniform compression (Cu) of circular test plate is about 0.85 and 1.2 times of Cu of square plate in fine sand and cohesive soils, respectively.

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