AUTHORS' REPLY

We are grateful to Shri S.S.N. Murthy for showing interest in our paper. We agree to the suggestion made by Shri Murthy in using the depth factors and correction factors due to the position of water-table.

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Development of a Light Weight Dynamic Penetrometer*

by

Alam Singh & Damodar Sharma

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In recent years, the dynamic penetrometers of various shapes have been used widely in sub-surface exploration jobs. Suitable correlation has been arrived at with a view to know the merits and demerits of penetrometers of different design. In Indian standards, dynamic penetration tests with cone alone and cone with circulation of bentonite slurry has been adopted.

In the light of the authors' paper, the writer is interested to clarify some points :

(*a*) For the preparation of compaction of sand in a steel tank, under different conditions, the uniformity of compaction was verified by mini-penetrometer. The criteria of assessment for the compaction is not given and the technique evolved under this aspect of study may be known.

(*b*) The present study by the authors' pertained to compaction of sand under remoulded state which is in compliance to Holtz and Gibbs work. However, in the field environmental aspects, the density index (RD) will differ largely and will be influenced by grain size, shape, mineralogy, partial cementation of silt grains. The justification of density index between the field and laboratory model tests may not reveal the realistic estimation, but it will be of qualitative one.

(*c*) In the authors development of the penetrometer, no information is given with regard to standardization equivalent to SPT. The correlation ratio of '*N*' values between the two, at various density index is not given, so as to know the effectiveness of new tool developed.

(*d*) The authors have verified the findings of Holtz and Gibbs and concluded that '*N*' value increases with increase in density index as well as with increase in overburden pressure. The influence of '*N*' value in moist condition is not studied and this state of affairs exist in the field also.

(*e*) In the field operations, the standard SPT is done using preboring technique either with sand bailer or with wash boring device and the spoon of the penetrometer is given a seating drive

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