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THE CORRELATION OF CONE SIZE IN THE DYNAMIC CONE PENETRATION TEST WITH THE STANDARD PENETRATION TEST

(MOHAN, D., AGGARWAL, V. S. & TOLIA, D. S. (1970). *Géotechnique* **20**, No. 3, 315–319; Discussion (1971) **21**, No. 2, 184–190)

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It is noticed that Professor Meardi, in his technique for dynamic cone penetration tests, uses a 48 mm dia. casing in which a 51 mm dia. cone with 34 mm dia. shaft is made to slide. The Authors are not surprised that the Writer is getting very erratic behaviour in clayey and silty soils since their own experience is similar. It is quite reasonable to expect a good correlation of the SPT with a 51 mm dia. cone in sandy soils *provided a casing is used* which would eliminate the side friction on the shaft carrying the cone.

Professor Meardi has missed the main point in the Paper, which mentions that *no casing* is used with the cone. In this case the side friction on the shaft becomes important and this would increase with depth. However, up to 9 m depth the Authors obtain a fair relationship with SPT. For design of shallow foundations the normal depth of exploration does not normally exceed 9 m. The Authors have also found that with the standard A rods (41.5 mm dia.), out of all the cone series varying between 43.75 and 75 mm dia., the cone of 62.5 mm dia. gave the most consistent results. It should also be conceded that driving a cone without casing is simpler and more economical than driving one with casing.

For soil exploration with the dynamic cone to a greater depth, a technique where friction on the shaft is eliminated by circulating the bentonite slurry has already been suggested (Mohan and Sen Gupta, 1970). The Authors have found that this technique is also simpler than using a casing pipe for eliminating side friction.

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THE DYNAMIC PENETRATION TEST: A STANDARD THAT IS NOT STANDARDIZED

(IRELAND, H. O., MORETTO, O. & VARGAS, M. (1970). *Géotechnique* **20**, No. 2, 185–192; Discussion **20**, No. 4, 452–456 and (1971) **21**, No. 2, 183–184)

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Mr Serota discusses the current British methods of carrying out the so-called standard penetration test. The Writers would agree with him that the practices adopted in Britain for many years, involving the use of casing having a minimum diameter of 6 in. and bailers or shells in drilling through granular soils, depart from the American practice of carrying out site investigation work, in which the SPT has its origins.