

# Investigation for Foundations of a Cement Factory Crusher\*

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## Author's Reply

Authors wish to express their thanks to Sri V. K. Tokhi and Sri A. T. Farooqui for having shown interest in the paper. The replies to the queries made are given below.

Several pits at the two terraces and trenches along slope (between upper and lower terraces) were examined. The typical values of different fractions are given in Table 1. The distance between the two pits is more than 2000 m. The foundation for the crusher would be located at a level closer to the lower terrace level. Hence the tests at the lower terrace would yield realistic parameters.

After the test, the nature of soil below the plate/block upto a distance of twice the width of plate/block was ascertained by excavation. A plate of 30 cm  $\times$  30 cm was used keeping in view that the side of plate was more than 8 times the maximum particle size present in the soil.

The lower value of  $C_u$  has been recommended keeping in view of the natural frequency and operating frequency of the system.

The guide lines for extent of investigation for a particular project are well known. The nature of shale was established during the initial prospecting.

The tests at upper terrace at foundation level were not performed in view of the difficulties of making deeper pits. The foundation level was closer to lower terrace level.

Terzaghi's bearing capacity equation was used for  $B = 5.5$  m and  $D_f = 5.0$  m. It gives a bearing capacity of 11.6 kg/cm<sup>2</sup> (p. 168 of the paper) considering the surface footing of width 5.5 m. The depth factor was neglected since the bearing capacity from shear consideration even for surface footing was high. Allowable pressure is governed on settlement consideration giving a value of 1.6 kg/cm<sup>2</sup>.

Barkan's recommendation serve as a guide only in the absence of test data.