

METHOD OF MEASUREMENT FOR THE ANGLE OF REPOSE OF SANDSⁱ⁾

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The writers wish to thank Dr. Ashraf for his interest in this paper. The writers have enjoyed his discussion on the mechanism of the formation of sand heap, and also encouraged by his explanation of the test results. The writers were not only interested in the sand heap itself, but also concerned about the possible utilization of the angle of repose as a parameter for the characterization and/or the estimation of some mechanical properties of sand. From this aspect, the standard method of measurement of the angle of repose is necessary for eliminating the unfavorable effects on the measured value; one of the objectives of this paper is to proposal a simple method of the measurement.

The relationships of the angle of repose ϕ_{rep} with the

physical and mechanical properties of sand were investigated based on the laboratory tests conducted by the writers on some 200 sand samples. The correlation of ϕ_{rep} with the grading and the grain shape were examined by Miura et al. (1997), and the correlation with the internal friction angle by Miura et al. (1998). The possible relationship between the dependency of ϕ_{rep} on the size of sand heap and the dependency of the internal friction angle ϕ_{rep} on confining pressure is discussed by Maeda and Miura (1999).

References

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ⁱ⁾ Vol. 37, No. 2, June 1997, pp. 89-96. (Previous discussion by A. M. Ghaly Vol. 39, No. 1, February 1999, 124p).

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