SWELLING CLAY IDENTIFICATION

W. T. CARDWELL, JR.
California Research Corporation

ABSTRACT

It is inexact to speak of "swelling clays" and "nonswelling clays." The highly swelling clays and the poorly swelling clays are merely end members of a continuous natural range. Identification of a clay as a montmorillonite does not tell whether it is a highly swelling or a poorly swelling clay. Lattice expanding ability as observed in the usual X-ray test is not directly related to macroscopic swelling ability; and swelling ability cannot be predicted from such an X-ray test. Swelling ability cannot be predicted from chemical analysis or particle size analysis. At the present time, the only reliable way to identify a clay as a highly swelling or poorly swelling clay is to perform a swelling test on it.

https://doi.org/10.1346/CCMN.1954.0030139 Published online by Cambridge University Press