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AMERICAN SOCIETY FOR TESTING AND MATERIALS
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Standard Test Method for Sand Content by Volume of Bentonitic Slurries¹

This standard is issued under the fixed designation D 4381; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

^{€1} NOTE—Editorial changes were made throughout and Section 9 added editorially in September 1993.

1. Scope

1.1 This test method covers the determination of the sand content of bentonitic slurries used in slurry construction techniques. This test method has been modified from API Recommended Practice 13B.

1.2 *This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this standard to consult and establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

D 653 Terminology Relating to Soil, Rock, and Contained Fluids²

2.2 American Petroleum Institute (API) Standard:

API RP 13B Recommended Practice Standard Procedure for Testing Drilling Fluids³

3. Terminology

3.1 For definitions of terms relating to this test method, refer to Terminology D 653.

4. Summary of Test Method

4.1 The glass measuring tube of the sand-screen set (Fig. 1) is filled with bentonitic slurry and water to the appropriate marks and is shaken. The mixture is poured through the wet screen. The funnel is fitted over the top of the screen and the assembly inverted, inserting the tip of the funnel into the glass measuring tube. All material is washed from the screen and the amount of sand read in the graduated tube, as percent by volume.

5. Significance and Use

5.1 This test method evaluates the amount of sand by volume in bentonitic slurry. The significance of this test method mainly relates to bentonitic slurries used for concrete



NOTE 1—Photo courtesy of N. L. Baroid—N. L. Industries, Inc., Houston, TX.

FIG. 1 Sand-Content Set

wall construction. The range of measurement is too limited for use in cement bentonite wall construction.

¹ This test method is under the jurisdiction of ASTM Committee D-18 on Soil and Rock and is the direct responsibility of Subcommittee D18.20 on Impermeable Barriers.

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² *Annual Book of ASTM Standards*, Vol 04.08.

³ Available from the American Petroleum Institute, 2101 L St., NW, Washington, DC 20037.