Recommended Practice for Testing Well Cements

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Suggested revisions are invited and should be submitted to the Standards Department, API, 200 Massachusetts Avenue NW, Suite 1100, Washington, DC 20001, standards@api.org.

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1 Scope

This standard specifies methods and gives recommendations for the testing of cement slurries and related materials under simulated well conditions.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

API Specification 10A, *Cements and Materials for Well Cementing*

API Recommended Practice 13I, *Laboratory Testing of Drilling Fluids*

ASTM C109/C109M [1], *Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)*

ASTM C188, *Standard Test Method for Density of Hydraulic Cement*

3 Terms, Definitions, Acronyms, Abbreviations, and Symbols

3.1 Terms and Definitions

For the purposes of this document, the following definitions apply.

3.1.1
absolute volume
The volume occupied by a material, not including the intergranular space in the case of a solid.

NOTE Absolute volume corresponds to the inverse of the density.

3.1.2
additive
Material incorporated in a cement slurry to modify or enhance some desired property.

3.1.3
annulus
Space between the pipe and the wellbore wall or an outer pipe.

3.1.4
atmospheric consistometer
Device used to condition fluids prior to some tests and for determining the thickening time of arctic slurries at atmospheric pressure.

3.1.5
batch mix
Process of mixing the entire volume of cement slurry prior to placement in the wellbore.

[1] ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428, www.astm.org.