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Oil and gas industries including lower carbon energy — Completion fluids and materials —

Part 9: Methods for evaluating performance of acidizing fluids

Industries du pétrole et du gaz, y compris les énergies à faible teneur en carbone — Fluides de complétion et matériaux —

Partie 9: Méthodes d'évaluation des performances des fluides acidifiants

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Foreword

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Oil and gas industries including lower carbon energy — Completion fluids and materials —

Part 9: Methods for evaluating performance of acidizing fluids

1 Scope

This document specifies the performance test procedures for acidizing fluids used as completion fluids and materials in oil and gas well operations.

NOTE The acidizing fluids mentioned in this document refer to hydrochloric acid, mud acid, polymer-based acid acidizing fluids, emulsified acid acidizing fluids, etc., used in acidizing operations of oil and gas wells, including fundamental acid solution and acidizing fluid system with additives, such as corrosion inhibitor and ferric ion (Fe^{3+}) stabling agent.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 3310-1:2016, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth*

3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
fundamental acid solution
solution composed of acid and water with no other additives

3.2
hydrochloric acid acidizing fluid system
hydrochloric acid mixed with functional additives to enhance its operational performance in specific industrial applications, which is used to stimulate carbonate formations

3.3
mud acid acidizing fluid system
mixture of hydrofluoric acid, functional additives and water in certain concentration, which is used to acidify sandstone reservoirs

3.4
polymer-thickened acid acidizing fluid system
acid system mixed with polymer to reduce friction, retard acid-rock reaction and uniform acid distribution

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