Recommended Practice on Drilling Fluids Processing Systems Evaluation

ANSI/API RECOMMENDED PRACTICE 13C
FOURTH EDITION, DECEMBER 2010

ISO 13501(Modified), Drilling fluids processing equipment evaluation

AMERICAN PETROLEUM INSTITUTE

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Upstream Segment

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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ISO 13501 was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for the petroleum, petrochemical and natural gas industries*, Subcommittee SC 3, *Drilling and completion fluids, and wellbore cements*.

This fourth edition cancels and replaces the third edition (ISO 13501:2005), which has been technically revised.

Introduction

This International Standard covers equipment which is commonly used in petroleum and natural gas drilling fluids processing. This equipment can be purchased or rented from multiple sources, and is available worldwide. No single-source or limited-source equipment is included, either by inference or reference.

International Standards are published to facilitate communications between purchasers and manufacturers, or provide interchangeability between similar equipment and materials purchased from different manufacturers and/or at different times, and to provide an adequate level of safety when the equipment or materials are utilized in the manner and for the purposes intended. This International Standard provides minimum requirements and is not intended to inhibit anyone from purchasing or using equipment made to other standards. This International Standard is subject to periodic review and can be revised or withdrawn at such time as deemed appropriate.

The purpose of this International Standard is to provide a method of assessing the performance of solids control equipment systems in the field. It includes procedures for evaluation of shale shakers, centrifugal pumps, degassers, hydrocyclones, mud cleaners and centrifuges, as well as an entire system evaluation. Shale-shaker screen labelling and separation potential of shale-shaker screens have been addressed as part of this International Standard.

This International Standard is based on API RP 13C, third edition, December 2004 (for drilling fluid processing equipment) and shale-shaker screen API RP 13E, third edition, May 1, 1993 (for shale shaker screens).

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Petroleum and natural gas industries – Drilling fluids processing systems evaluation

1 Scope

This International Standard provides a standard procedure for assessing and modifying performance of solids control equipment systems commonly used in the field in petroleum and natural gas drilling fluids processing.

This procedure is not intended for the comparison of similar types of individual pieces of equipment.

Clause 11 in this document replaces Clause 11 currently in the ISO 13501:2005. It specifies a different labelling requirement for shale shaker screens that will be permanently attached to the screen. It also covers the marking of shipping containers for shale shaker screens.

This International Standard Annex B provides a standard procedure for quick assessment of a solids control screen sizing. The method can be used in the field or laboratory for identification of an unknown screen approximate size range. It is provided for information only and does not replace or supplement the normative testing shown in Clauses 9 through Clause 11 in this document.

This procedure is not intended for the operating comparison or ranking of similar types of individual pieces of equipment.

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.

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

ANSI/AWWA Standard C700, *Cold-water meters — Displacement type, bronze main case*

API, *Manual of Petroleum Measurement Standards,* Chapter 5.3—*Measurement of Liquid Hydrocarbon by Turbine Meters*

3 Terms, definitions, symbols and abbreviated terms

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

3.1 Terms and definitions

3.1.1
addition section
compartment(s) in the surface drilling fluid system between the removal section and the suction section which provides a well-agitated compartment(s) for the addition of commercial products such as chemicals, necessary solids and liquids

3.1.2
agitator
mechanical stirrer
mechanically driven mixer that stirs the drilling fluid by turning an impeller near the bottom of a mud compartment to blend additives, suspend solids and maintain a uniform consistency of the drilling fluid