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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 5005-2010

Replacing GB/T 5005-2001

Specifications of drilling fluid materials

钻井液材料规范

(English Translation)

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Foreword

This revised standard adopts ISO 13500:2008 "oil and gas industry drilling material specifications and test" (in English).

This standard is based on ISO 13500:2008 redrafted. The standard lists the reg number in Appendix A and ISO 13500:2008 Reg number control list.

Taking into account China's national conditions, in the use of ISO 13500:2008, the standard of this made some changes. About the technical differences have been incorporated into the text in. In Appendix B gives a list of these technical differences and the reasons for the

reference.

This standard also made the following editorial changes.

- "This International Standard" be replaced by "this standard";
- Use the decimal symbol instead of as a decimal comma " , " . " , " ;
- Use SI units instead of the ISO 13500 in imperial units.

This standard replaces GB/T 5005-2001 "drilling material specification." this standard compared with GB/T 5005-2001 The main changes are as follows.

- Increased Chapter 13, "low viscosity polyanionic cellulose (PAC-LV)", Chapter 14 "high-viscosity polyanionic cellulose (PAC-HV) "and Chapter 15," Drilling grade biopolymers";
- Taking into account of the actual oil and mineral resources, the barite and hematite according to the density divided into two levels, respectively (see 3.1.2 and Excerpts 4.1.2);
- Delete the original standard in Appendix A "Product Test Report Form" and Appendix B "Product Quality Inspection format"; to Appendix D "Determination of the viscosity effect" incorporated into the text, "Determination of the equivalent spherical diameter less than 6μm particle sedimentation method" instead;
- According to GB/T 20000.2-2001 "Standardization Guide Part 2. Adoption of International Standards rules" adjusted this standard Arrangement order.

Appendix D of this standard is a normative appendix, Appendix A, Appendix B, Appendix C is informative appendix.

The standard proposed by China National Petroleum Corporation.

This standard by the National Standardization Technical Committee of Oil and Gas.

This standard was drafted. Petroleum Industry Standardization Institute, Dagang Oilfield Group Limited oilfield chemicals.

1 Scope

This standard specifies the test procedures and performance of oil and gas wells drilling fluid materials. These materials include barite, hematite, drilling level expansion Bentonite, untreated bentonite, OCMA grade bentonite, attapulgite, sepiolite, technical grade low viscosity carboxymethyl cellulose, carboxymethyl technical grade high viscosity Cellulose, starch, polyanionic cellulose low viscosity, high viscosity grade polyanionic cellulose and drilling biopolymers.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 16783.1-2006 oil and natural gas industries - Field testing of drilling fluids - Part 1. Water-based drilling fluids (ISO 10414-1.

2001, IDT)

ASTMD1141-1998 (2003) artificial seawater formulated with standard practice ASTM E11 test sieve and wire standards ASTM E161 precision electroformed sieve standards Use ASTM E177 test method precision and bias terms ASTM E691 precision of the method for the determination of test implementation of research laboratory

3.1 Overview

3.1.1

Drilling grade barite powder is commercial ore containing barium sulfate produced. Manufacturers shall keep the certificate of analysis of these ores and commercial Similar documents. Barite powder can be mixed by a single ore or mineral production, either directly mined products, but also can be used washing, shake Bed, jigging or synergistic flotation method processed products. In addition to barium sulfate (BaSO_4), the barite powder may also contain other incidental mine Thereof. Because of these mineral impurities, making the color change commercial barite powder varies from white to gray, red or brown. often See incidental minerals such as quartz, chert, siderite, dolomite and metal oxides and sulfides. Although these minerals Normally Under the conditions is not dissolved, but under certain conditions, they can be certain drilling fluids and other components react to produce drilling fluid performance Adverse effects (for details, see Appendix C). Barite powder and test the accuracy of the rest of the products in Annex D.

3.1.2

in accordance with this standard provides Barite shall comply with the technical requirements specified in Table 1.

Table 1 barite powder technical requirements

project

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Grade I II grade

Density/(g/cm³) ≥ 4.20