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

GB/T 21411.2-2009

**Downhole equipment for petroleum and natural gas industries
-- Progressing cavity pump systems for artificial lift -- Part 2:
Surface-drive systems**

石油天然气工业井下设备 人工举升用螺杆泵系统 第2部分：地面驱动装置

(English Translation)

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Foreword

GB/T 21411 "oil and gas industry equipment downhole artificial lift with screw system" is divided into two parts.

--- Part 1. Pumps;

--- Part 2. Ground drive.

This section GB/T 21411 Part 2.

The partial modification using ISO 15136-2:2006 "oil and gas industry with a screw pump artificial lift systems - Part 2. Ground drive Dynamic Systems "(in English).

This portion of the ISO 15136-2:2006 technical differences are as follows.

--- Remove 7.3e) "maximum operating torque";

--- The 7.3f) in "maximum input power" to "power rating";

--- For other international standards cited in this section has been modified or is equivalent to our standard referenced in this section of this these national standards instead of the corresponding international standards (see Part 2 of this chapter).

For ease of use, this section made the following editorial changes.

"," --- With a decimal point instead of a comma as the decimal point, "";

--- The ISO 15136-2:2006 standard original name of "oil and gas industry" to "oil and gas industry downhole equipment";

- "ISO 15136 in this section" to "this Part";
- Original standard Appendix E to this part of Annex A;
- Original Standard Appendix F to this part of the appendix B;
- Original criteria in Appendix B to this part of Annex C;
- Original standard Appendix H to this part of the Annex D;
- Original criteria in Appendix D to this part of Annex E;
- Original standard Appendix C to this part of the appendix F;
- Original criteria in Appendix A to this part of Annex G;
- Original standard Appendix G to this part of the appendix H;
- Remove the cover of the international standard, PDF statement, preface and introduction.

Appendix G to this part of the normative appendix, Appendix A, Appendix B, Appendix C, Appendix D, Appendix E, Appendix F, Appendix H for information only

appendix.

This part of the National Oil Drilling Equipment and Tools Standardization Technical Committee (SAC/TC96) and focal points.

This section is responsible for drafting the Beijing Petroleum Machinery Factory, Daqing Oilfield Company Limited Production Engineering Research Institute, Daqing Oilfield force have God Pump Limited companies participated in the drafting.

1 Scope

This part of the design of the ground screw driving means oil and gas industry uses, design verification and effectiveness, manufacturing and control data System, performance evaluation and other aspects of the maintenance requirements. This section applies to the ground to meet the driving means defined product. Meanwhile, appendix provides Selection, installation, operation and rod selection and use of information braking systems.

In addition to the overall design, this section does not cover the following. the bottom of the drive system, rod, rod slips, sealed boxes, electronic control equipment, instrumentation, External power conversion equipment, auxiliary equipment (such as belts, pulleys and apparatus shroud). Other standards in might overwrite the contents of these devices.

2 Normative references

The following documents contain provisions which, through reference GB/T 21411 in this section constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 230.1 Metallic Rockwell hardness test - Part 1. Test methods (A, B, C, D, E, F, G, H, K, N, T scale) (GB/T 230.1-2004, ISO 6508-1:1999, MOD) GB/T 231.1 Brinell hardness test - Part 1. Test method (GB/T 231.1-2002, eqvISO 6506-1.

1999)

GB/T 2828.1 Sampling procedures for inspection - Part 1. by acceptance quality limit (AQL) retrieval batch inspection sampling plan (GB/T 2828.1-2003, ISO 2859-1:1999, IDT) GB/T 3452.1 hydraulic and pneumatic rubber O-ring Part 1. Dimensions, tolerances (GB/T 3452.1-2005, ISO 3601-1:2002, MOD) GB/T 3452.2 hydraulic and pneumatic rubber O-ring Part 2. appearance quality inspection standard (GB/T 3452.2-2007, ISO 3601-3:2005, IDT) GB/T 4340.1 Vickers hardness test - Part 1. Test method (GB/T 4340.1-1999, eqvISO 6507-1.

1997)

GB/T 9445 NDT personnel qualification and certification (GB/T 9445-2008, ISO 9712:2005, IDT) GB/T 19000 Quality management systems - Fundamentals and vocabulary (GB/T 19000-2008, ISO 9000:2005, IDT) GB/T 20972 (all parts) oil and gas exploration in the oil and gas industry for hydrogen sulfide containing material environment [ISO 15156 (the Part), IDT] ISO 2859-2 Sampling procedures for inspection - Part 2. Batch test for isolated by limiting quality (LQ) retrieves sampling plan ASTM A370 steel products, mechanical tests Standard Test Methods and Definitions ASTM D1415 Standard Test Method for Rubber Property - International Hardness Standard Test Method for Rubber Property ASTM D2240 Shore hardness ASTM E140 metal standard hardness conversion table (Brinell hardness, Vickers hardness, Rockwell hardness, surface hardness, Knoop hardness and Shore hardness the relationship between the degree) MIL-STD-105E Sampling procedures and tables