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

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**Petroleum and natural gas industries -- Downhole equipment --
Completion accessories**

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(English Translation)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses redrafted law revision using ISO 14998:2013 "oil and gas industry downhole tools completion tools annex." this standard and ISO 14998:2013 technical differences and the reasons are as follows.

--- On normative references, this standard made a technical difference with the adjustment to adapt to China's technical conditions, adjust the situation Concentration reflected in the second chapter "Normative references", the specific adjustments are as follows.

- Replacing ISO 6508-1 with International Standard GB/T 230.1 modified;
- Replacing ISO 6506-1 with International Standard GB/T 231.1 modified;
- Equivalent to the international standard GB/T 2828.1 instead of ISO 2859-1;
- GB/T 3452.1 modified to adopt international standards instead of ISO 3601-1;
- Equivalent to the international standard GB/T 3452.2 instead of ISO 3601-3;
- Replaced ISO 6507-1 with International Standard GB/T 4340.1 modified;
- Equivalent to the international standard GB/T 9445 instead of ISO 97125;
- Equivalent with the international standard GB/T 19830 instead of ISO 11960;
- Equivalent to the international standard GB/T 20970 instead of ISO 14130;
- Replace ISO 15156 (all parts) with GB/T 20972 (all parts) equivalent to international standards;
- Equivalent to the international standard GB/T 21410 instead of ISO 16070;
- Replaced ISO 10423 with revision GB/T 22513 of international standard;
- Equivalent to the international standard GB/T 27025 instead of ISO 17025;
- GB/T 29169 modified to adopt international standards instead of ISO 10407-2;
- Replaced ISO 17078-1 with SY/T 6915.1 modified to use international standards;
- Replace ISO 17824 with SY/T 6916 modified to use international standards.

--- 6.3.3.2.1 added "5) impact energy", impact energy is also one of the important parameters of mechanical properties of materials.

--- 6.3.3.3 adds "e) other physical properties", non-metallic materials in addition to the performance standards given there are other physical can, such as anti-corrosion, high temperature and so on.

--- Removed some terms and definitions.

This standard compared with ISO 14998:2013, made the following editorial changes.

--- Removed references.

This standard by the National Petroleum Drilling Equipment and Tools Standardization Committee (SAC/TC96) and focal point.

This standard was drafted unit. Underground oil industry tools Quality Supervision and Inspection Center, China Petroleum and Chemical Corporation Petrochemical Engineering Institute Dezhou Stone Oil Drilling Research Institute, Dannoy (Beijing) Petroleum Technology Service Co., Ltd., Sinopec Northwest Oilfield Branch Engineering and Technology Management Department, in National Petroleum Bohai Drilling Engineering Co., Ltd. Engineering Research Institute, Anton Oil Technology (Group) Co., Ltd., Shengli Oilfield Plateau Petroleum Equipment limited liability company.

Introduction

This standard is completed by the completion tool accessory users (buyers) and manufacturers (suppliers) jointly developed, widely used in the world's stone Oil and gas industry. This standard gives both parties the requirements and information on the selection, processing, testing and use of completion tools accessories. this in addition, this standard also gives the manufacturer (supplier) the minimum requirements, manufacturers (suppliers) should comply with this standard.

This standard was developed in order to grade additional quality documents and design recognition, users (buyers) can choose according to these changes Choose the level of special needs.

This standard allows the use of higher-level requirements for quality control and design validation, providing users (buyers) with a special application profile the level of pieces of demand.

To meet the special needs of users (buyers) or application requirements, this standard provides three quality levels. Quality level Q3 is the standard the minimum quality grade provided, quality grade Q2 provides additional inspection and verification steps, the quality level Q1 is provided by this standard the highest level. Users (purchasers) with special requirements can specify additional quality requirements.

To meet the specific needs of users (buyers) or application requirements, this standard provides seven standard design verification levels (V6 to V0).

Design Confirmation Level V6 is the lowest level and equipment requirement identified by the manufacturer (supplier). Confirm the higher complexity and accuracy of the test, the smaller the rank number.

Users of this standard should be aware that the above outline requirements may be required for individual purposes in this standard. The purpose of this standard is not limited to Instead, suppliers (suppliers), or restricted users (buyers) purchase, but in the tools and engineering solutions to provide choices. This situation Especially suitable for innovative or developing technology areas. In the case of other alternatives, the manufacturer (supplier) should confirm this standard all differences and provide detailed instructions.

Oil and gas industry Downhole Tools Completion Tools Accessories

1 Scope

This standard specifies the oil and gas industry completion tools and accessories in the functional and technical requirements and guidelines, including.Design, Design Verification and Validation, Materials, Documents and Data Control, Maintenance, Repair, Transport, Storage. This standard specifies the completion tool attachment pressure, Axial load, disconnected or reconnected, tubing telescoping, channel opening function.

This standard does not apply to GB/T 19830, GB/T 28259, GB/T 22513, GB/T 20970, GB/T 21410, GB/T 29169, SY/T 6915.1, SY/T 6916, ISO 28781 does not apply to the following products. Liner or tubing hanger, downhole test Tools, sand control screens, fluid control valves, ground control bushings and throttles, downhole lifting equipment, electrical controls, nor do they apply to these products Connect and install.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 230.1 Metallic materials Rockwell hardness test Part 1. Test methods (A, B, C, D, E, F, G, H, K, N, T standard Ruler) (GB/T 230.1-2009, ISO 6508-1:2005, MOD) GB/T 231.1 Brinell hardness test of metallic materials Part 1. Test methods (GB/T 231.1-2009, ISO 6506-1.

2005, MOD)

GB/T 2828.1 Sampling procedures for sampling inspection - Part 1. Batch inspection sampling plan retrieved by acceptance quality limit (AQL) (GB/T 2828.1-2012, ISO 2859-1:1999, IDT) GB/T 3452.1 Hydraulic Pneumatic Sealing Sealants Part 1. Dimensions