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

GB/T 24261.1-2009

**Marine seismic digital streamer system -- Part 1: Standards for
specifying hydrophone parameters**

石油海上数字地震采集拖缆系统 第1部分：水听器技术条件

(English Translation)

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Table of Contents

Foreword
1 Scope
2 Normative references
3 Terms, definitions and letter symbols
3.1 Terms and Definitions
3.2 Letter symbols

Foreword

GB/T 24261 "digital oil offshore streamer seismic acquisition system" is divided into three parts.

- Part 1. hydrophone technical conditions;
- Part 2. hydrophone streamer technical conditions;
- Part 3. central recording system.

This section is the first part. hydrophone technical conditions.

The partial modification of international Society of Geophysics (SEG) sea streamers digital standard Part 1 (geophysical standards, 52,02, 242-248,1987, Part 1). This section redrafted. It is given in Appendix A of this part of the reg number and Geophysics standards, 52,02,242-248,1987, the first title of the content portion of the control list for reference.

Because of the special needs of China's oil exploration industry, this section at the time of adoption of international standards has been modified. The given in Appendix B Section and Geophysics standards 52,02,242-248,1987, technical differences between Part 1 and the list of reasons, for reference.

This part of the Annex A, Annex B and Annex C is informative appendices.

This part is proposed by the China National Petroleum Corporation.

This part of the National Oil and Gas Standardization Technical Committee centralized.

This section drafted by. China National Offshore Oil Corporation Oilfield Services Limited Geophysical Exploration Division, Chinese Petroleum Corporation Division East geophysical equipment Geophysical Exploration Co., Ltd., Xi'an Branch, oil industry instrumentation Quality Supervision and Inspection Center, MLR Source Guangzhou

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1 Scope

This section GB/T 24261 specifies the offshore oil digital streamer seismic acquisition system common to three types of hydrophones (piezo water Hearing, with integrated preamplifier hydrophones, hydrophone with transformer coupling) of the composition, requirements and calibration methods.

This section applies to hydrophone fabrication, inspection and quality assessment.

2 Normative references

The following documents contain provisions which, through reference GB/T 24261 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 3102.7-1993 Quantities and units of acoustics GB/T 3238-1982 Acoustics volume level and reference value GB/T 3947-1996 Acoustics Terminology GB/T 4130-2000 low-frequency acoustic hydrophone calibration methods ASTM E380-1979 name specified

3.1 Terms and Definitions

GB/T 3947-1996 and GB/T 4130-2000 and established the following terms and definitions apply to this section.

3.1.1

Receiving the seismic wave sensor in the water by one or more piezoelectric units can be exposed, it may also have an encapsulate.

3.1.2

Piezoelectric water with preamplifier hearing. The amplifier can amplify the piezoelectric hydrophone output signal, the output impedance of less than direct coupled the output impedance of the piezoelectric element, the desired amplifier power from the internal battery or an external power source, this pre-amplifier may be a voltage, and electrical charge Stream type.

3.1.3

Underwater seismic sensor consists of a transformer with a single or a plurality of piezoelectric units. Within the operating frequency band with transformer coupled hydrophone Low output impedance than the straight lotus piezoelectric unit output

impedance.

3.1.4

The piezoelectric hydrophone positive sound pressure (sound pressure increase) under the action of the piezoelectric hydrophone display terminal voltage of positive polarity or charge, usually red FIG.

3.2 Letter symbols

This part of the letter symbols used in line with GB 3102.7-1993, GB/T 3238-1982, GB/T 3947-1996,