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

GB/T 23256-2009

**Petroleum liquids -- Automatic pipeline sampling -- Statistical
assessment of performance of automatic samplers determining
the water content in hydrocarbon liquids**

石油液体管线自动取样 测定石油液体中水含量的自动取样器性能的统计学评估
(English Translation)

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Foreword

This standard is identical with the international standard ISO/T R9494.1997 (E) "oil pipeline automatic sampling liquid petroleum liquids --- Determination Statistical evaluation of water content autosampler performance. " this standard is equivalent to translate international standards document ISO/T R9494.1997 (E).

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

--- 'The technical report' of the term to 'this standard';

--- With a decimal point ' . 'Instead of as the decimal symbol, ' ' ;

--- With multiplication 'x' in place of the multiplication sign '*';

--- Integral symbol 'integral 'Instead of the integral sign' Rao integral ' ;

--- Square root symbol 'Sang' instead of the square root symbol 'sqrt';

--- Typographical errors have been corrected incorporated into the text, and they are involved in terms of the margin of a single vertical line identification;

--- Increase the informative appendix NA Advertisement users.

The standard for the oil and gas industry standards SY/T 5317-2006 "petroleum liquids pipeline automatic sampling method," a useful complement, Technical support for SY/T 5317-2006 standard chapter 16.

NA appendix of this standard is an informative annex.

The standard proposed by China National Petroleum Corporation.

This standard by the National Standardization Technical Committee of Oil and Gas (SAC/TC355) centralized.

This standard was drafted. Chinese Petroleum Corp. Metrology Institute of natural gas.

Introduction

This standard uses an international viewpoint and method of the current password is given under the common case, the measurement was washed with petroleum pipeline automatic sampling system when body water content evaluation and expression of uncertainty measurement principles, methods and brief steps to make relates to the pipeline automatic sampling system to measure water containing FIELD amount, you can use uniform guidelines on the measurement results and quality assessment, expressed and compared.

Measurement Uncertainty about the terminology used in this standard method for estimating uncertainty of measurement methods and measuring the expression of Uncertainty, National Metrology and technical specifications JJF1059-1999 "Evaluation and Expression of Uncertainty in Measurement" inconsistent statements.

GB/T 23256-2009/ISO/TR9494:1997 Petroleum liquids pipeline automatic sampling Determination of petroleum liquid water content Statistical evaluation of the performance autosampler

1 Scope

This standard describes the mathematical method to assess the automatic sampling system of total uncertainty for the determination of liquid petroleum pipeline water content automatically Sampling system.

Through statistical methods, the system is a series of independent variables points to "extract" automatic sampling system with defined uncertainty and Machine uncertainty synthesis of the mathematical model to assess the total uncertainty (tolerance).

Determination of water content tolerance as sampling frequency, water content and water analysis function of the number, in this standard are carried out in the form of charts Summary, 6 to 11.

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 to use the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

SY/T 5317-2006 Petroleum liquids pipeline automatic sampling [ISO 3171. 1988 (E), IDT]

3 Symbol

3.1

Description of Symbols in Table 1.

3.2

Relative systematic uncertainties relative random uncertainty and symbols are as follows.

Note: The relative uncertainty $x_0 = x_0$ Uncertainty X_0 value

--- In aqueous standard SY/T 5317-2006 Chapter 5 and described in Appendix A of the uneven distribution (such as poor dispersion effect).

Rao s relatively systematic uncertainty Rao r relative random uncertainty

--- Change of Water sampling system standard SY/T 5317-2006 Chapter 8 describes the cause (such as non-uniform power).

Chou s relatively systematic uncertainty Chou r relative random uncertainty

--- Unit Sample volume uncertainty.

--- Flowmeter nonlinearity (such as turbine flow meter K-factor standard SY/T 5317-2006 described in Chapter 10 Variety).

Ba s relatively systematic uncertainty (only use Chapter 9) Ba r relative random uncertainty

--- Water content caused by changes in the sampling process in the standard SY/T 5317-2006 described in Chapter 11 (for example emulsified or evaporation).

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