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

GB/T 21451.4-2008

**Petroleum and liquid petroleum products -- Measurement of
level and temperature in storage tanks by automatic methods --
Part 4: Measurement of temperature in atmospheric tanks**

石油和液体石油产品 储罐中液位和温度自动测量法 第4部分: 常压罐中的温度测量

(English Translation)

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Foreword

GB/T 21451 "Petroleum and liquid petroleum product storage tank liquid level measurement and automatic temperature" is divided into six sections.

- Part 1. pressure tank level measurement;
- Part 2. tanker tanks level measurement;
- Part 3. Pressure tank level measurement;
- Part 4. atmospheric tanks temperature measurement;
- Part 5. tanker compartment temperature measurement;
- Part 6. Pressure tank temperature measurement.

This section GB/T Part of 421,451.

The partial modification of the use of ISO 4266-4:2002 "Petroleum and liquid petroleum product storage tanks --- automatic level and temperature measurement method ---Part 4. atmospheric tanks Temperature Measurement "(in English).

This section according to ISO 4266-4:2002 redrafted.

To facilitate the practical use of ISO 4266-4:2002 has been modified as follows.

- The normative references in "ISO 4268:2000 Petroleum and liquid petroleum products --- manual temperature measurement method" to "GB/T 8927 Petroleum and liquid petroleum products - Temperature measurements - Manual methods";
- Remove the 6.2 "(1,000 barrels)";
- Standard "Trade/custody transfer metering" to "custody transfer measurement";
- Remove the standard uncertainty of the value before the "±";
- Taking into account the Chinese diet and concise language, made editorial changes.

This part of the National Standardization Technical Committee on products and lubricant oil

(SAC/TC280) proposed.

This section is under the jurisdiction of China Ltd. Petrochemical Research Institute of Petroleum.

This section is responsible for drafting units. China Research Institute of Petroleum Corp. Petrochemical, China Petroleum & Chemical Corporation Division of Beijing Yanshan Company refinery.

Participated in the drafting of this section. Beijing Great Wall Airlines Swiss Race Control Technology Co., Ltd., Beijing American Airlines Automation System Engineering Co., Ltd. the company.

1 Scope

This section provides for use in custody transfer measurement of automatic tank thermometers (ATT) selection, accuracy, installation, calibration and correction Test methods for atmospheric tanks Reid Vapor Pressure less than 100kPa temperature measuring oil and liquid petroleum products.

This section does not apply to temperature measurement cave or freeze in the tank.

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this part. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this section, however, encourage the parties to this part of the research agreement Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 8927 Petroleum and liquid petroleum products - Temperature measurements - Manual methods (GB/T 8927-2008, ISO 4268:2000, MOD) ISO 4266-1 Petroleum and liquid petroleum product storage tanks --- automatic level and temperature measurement method --- Part 1. pressure tank Level measurement 1)

1) ISO 4266-1 coming into national standards, after the transformation can be directly referenced.

ISO 1998 (all parts) --- petroleum industry terminology

3 Terms and Definitions

The ISO 1998 and established the following terms and definitions apply to this section.

Continuous measurement of the temperature inside the tank instruments.

Note: ATT, also known as automatic tank measurement system, usually including accurate

temperature sensor, installed in the field for the transmitter signals transmitted and received Receive/display unit.

Electronic sensors to measure the temperature of the liquid components in the tank through the principle of resistance varies with temperature.

Specific measuring point temperature of the tank with ATT point temperature components.

By a plurality (usually three or more) temperature element composition points to measure the temperature of the selected level of ATT.

Note: The reading should display unit submerged in the liquid in the container by the temperature sensing element to obtain not only the average temperature of the liquid can be calculated from them, but also to in the liquid distribution tank temperature display.