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

GB/T 35138-2017

**Measurement of fluid flow in closed conduits -- Ultrasonic
transit-time meters for liquid**

封闭管道中流体流量的测量 渡越时间法液体超声流量计

(English Translation)

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Table of Contents

Preface
1 Scope
2 Normative references
3 Terms, definitions, symbols, and abbreviations
3.1 Quantity
3.2 Flowmeter Structure
3.3 Thermal Conditions
3.4 Statistics
3.5 Calibration
3.6 Symbols and Subscripts
3.7 Abbreviations
4 Measurement principle
4.1 Overview
4.2 Volume flow
4.3 Basic Type Description
4.4 Time Delay
4.5 Refraction
4.6 Reynolds Number
4.7 Temperature and Pressure Corrections
5 Performance Requirements
6 Measurement uncertainty
6.1 General
6.2 Uncertainty component assessment
7 Installation
7.1 General
7.2 Use of standard equipment
7.3 Laboratory Calibration or Theoretical Prediction
7.4 Other Installation Impacts
8 Test and Calibration
8.1 General
8.2 Single Test - Using Theoretical Prediction
8.3 Single Test - Flow Calibration in Flow Conditions

- 9 Performance Test
 - 9.1 General
 - 9.2 Repeatability and Reproducibility
 - 9.3 Additional Tests for Transducers Installed on External Flowmeters
 - 9.4 Uncertainty assessment of flowmeters for predicting performance using theoretical prediction
 - 9.5 Liquid-mechanical conditions
 - 9.6 Analog Channel Failure and Replacement Components
- 10 Characteristics of Flowmeters
 - 10.1 Body, Material and Structure
 - 10.2 Transducer
 - 10.3 Electronic Components
 - 10.4 Software
 - 10.5 Replacement Parts
 - 10.6 Determining Density and Temperature
- 11 Actual operation
 - 11.1 General
 - 11.2 Verification Process
 - 11.3 Running Diagnostics
 - 11.4 Verification tracking, mutual comparison and inspection during operation
 - 11.5 Recalibration
- Appendix A (Normative) Temperature and Pressure Correction
- Appendix B (Informative) Impact of Roughness Changes
- Appendix C (Informative) Uncertainty Calculation Example
- Appendix D (Informative) Documentation
- Reference

Foreword

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

This standard uses the translation method equivalent to the use of ISO 12242:2012 "Measurement of fluid flow in closed pipes. Transit time method Liquid ultrasound Flowmeter.

The Chinese documents that are consistent with the international documents that are normatively referenced in this standard are as follows.

--- GB/T 17611-1998 Terms and symbols for measurement of fluid flow in closed pipes (idt ISO 4006:1991) this standard is proposed by China Machinery Industry Federation.

This standard is under the jurisdiction of the National Industrial Process Measurement, Control, and Automation Standardization Technical Committee (SAC/TC124).

1 Scope

This standard specifies the use of ultrasonic signal transit time to measure liquid ultrasonic flowmeters in one-way homogeneous liquid flow in closed pipes.

(Hereinafter referred to as. flow meter) Terms, symbols and abbreviations, measurement principles, performance, calibration, output characteristics, and installation conditions.

This standard has no restrictions on the maximum or minimum size of the flowmeter.

This standard applies to the presence or absence of a dedicated verification (calibration) system, the use of plug-in and clip-on transducers (for beam refraction and beam Refraction of two configurations of flowmeters, including metered flowmeters and flowmeters with field mounted transducers.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article Pieces. For undated references, the latest version (including all amendments) applies to this document.

ISO 4006 Measurement terms and symbols for fluid flow in closed pipes
(Measurementoffluidflowinclosedcon-duits-Vocabularyandsymbols)

3 Terms, definitions, symbols and abbreviations

The terms and definitions defined by ISO 4006 and the following apply to this document.

3.1 Quantity

3.1.1

Volume flowrate

In the formula.

V --- volume;

t --- time.

Note: Rewrite ISO 80000-4:2006[41], definition 4-30.

3.1.2

Measuring pressure metering pressure the fluid pressure in the flowmeter associated with the indicated volume under flow conditions.

3.1.3

Mean velocity within the meterbody the fluid flow is divided by the cross-sectional area of the body.