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

GB/Z 35140-2017

**Measurement of fluid flow by means of pressure-differential
devices -- Guidelines for the specification of orifice plates,
nozzles and Venturi tubes beyond the scope of GB/T 2624**

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Foreword

This instructional document has been drafted in accordance with the rules given in GB/T 1.1-2009.

This Guidance Document is translated using the equivalent ISO /T R15377.2007 "Measurement of Fluid Flow with Differential Pressure Devices ISO 5167

Guidelines for the Use of Orifices, Nozzles and Venturi Beyond Range "(in English).

Our document, which corresponds in a consistent manner to the international documents that are normative references in this Guidance Document, is as follows.

--- GB/T 17611-1998 Measurement of fluid flow in closed conduits Terms and symbols (idt ISO 4006.1991)

The following technical document has made the following editorial changes.

--- The standard name was changed to "use differential pressure devices to measure fluid flow GB/T 2624 outside the range of orifice plate, nozzle and venturi

Guide to Use. "

This guidance document is proposed by China Machinery Industry Federation.

This Guidance Document is governed by the National Technical Committee for Measurement, Control and Automation of Industrial Processes (SAC/TC124).

The guiding technical document is drafted by Shanghai Institute of Industrial Automation Instrumentation.

The guidance of technical documents to participate in the drafting unit. Beijing Ruipu ternary Instrument Co., Ltd., Jiangyin City, throttling Plant Co., Ltd., Zhejiang

Cangnan Instrument Group East Star Energy Technology Co., Ltd., Shanghai Instrumentation Control System Test Institute, Dantong Tongbo Electric Group.

1 Scope

This Guidance Document specifies the geometric dimensions of the tapered inlet orifice, 1/4 orifice plate, eccentric orifice and 10.5 ° contraction section venturi

Inch and how to use it This guidance document also gives recommendations for the use of rectangular edge plate and nozzles outside the scope of GB/T 2624.

Note The data based on this guidance document may, in some cases, be obsolete or incomplete.

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 2624.1-2006 Measurement of full pipe fluid flow using differential pressure devices installed in circular sectioned pipes - Part 1. General

Principles and requirements (ISO 5167-1:2003, IDT)

ISO 4006 closed pipe fluid flow measurement terms and symbols
(Measurement of fluid flow in closed conduits - Vocabulary and symbols)

3 Terms and definitions

ISO 4006 and GB/T 2624.1 defined terms and definitions apply to this document.

4 symbol

The symbols in Table 1 apply to this document.

Table 1 symbol

Symbol represents the amount
dimension

M. Quality

L. Length

T. Time

SI unit

a take pressure port aperture L m

C outflow coefficient 1 -

d working conditions under the device orifice or throat diameter Lm

D Working pipe diameter upstream (or classic Venturi upstream diameter) Lm

d_{tap} pressure port diameter L m

e Inner hole thickness (axial length) L m

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