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**Metrological Terms and Their Definitions for Flow Rate
(English Translation)**

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4 Letter symbols (17)

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Terms and definitions of flow measurement

1 General term

1.1 flowrate

The amount of fluid flowing through a section is called flow. Flow is a collective term for instantaneous flow and cumulative flow. during one period the amount of internal fluid flowing through a certain cross section is called cumulative flow, also called total. When the time is short, the fluid flows through a certain section the quantity is called instantaneous flow, and in the case of no misunderstanding, instantaneous flow can also be referred to as flow. Volume meter for flow when it is displayed, it is called volume flow, and when it is expressed by mass, it is called mass flow.

1.2 Pipeflow, ductflow the fluid fills the flow of the pipe.

1.3 Open Channel Flow the liquid has a free surface flow in the open channel.

1.4 flowmeter

Apparatus for measuring flow. It usually consists of a primary device and a secondary device.

Note: High accuracy and good stability. The flowmeter that can be used as a comparison standard for other flowmeters is called standard flowmeter.

1.5 Flowmeter error characteristic curve (errorperformancecurveofflowmeter) the curve showing the relationship between the flow rate and the error of the flowmeter is a function of other quantities that are measured and affect the measurement error.

1.6 metertube

In all aspects, it meets the technical requirements in the standard, and a specially processed section of pipeline equipped with a flow measurement device.

1.7 Primary device

A device that generates a flow signal. Depending on the principle used, the primary device can be inside or outside the pipeline.

Note: For electromagnetic flowmeters, a primary device includes. a measuring tube, one or more pairs of radially opposed signals Electrode and an electromagnet that generates a magnetic field in the measuring tube. For differential pressure flowmeters, the primary device includes a measuring tube, Throttling device and pressure taking hole. For ultrasonic flowmeters, the primary device includes a measuring tube and an ultrasonic transducer.

1.8 secondary device A device that receives a signal from a primary device and displays, records, converts, and/or transmits the signal to obtain a flow value.

1.9 output signal

Is the output of the secondary device. This signal is a function of flow.

1.10 calibration factor of the primary device the quotient of the flow rate and the corresponding signal value sent by the primary device under the specified reference