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**INDUSTRY STANDARD OF THE
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**Verification Regulation of Recorders for Industrial. Process
Measurement
(English Translation)**

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Industrial process measurement recorder verification procedures

1 Scope

This procedure applies to the use of thermocouples or thermal resistors to measure temperature and to modulate DC voltage, current and resistance.

Quasi-electrical signal input, reflecting the first verification, subsequent verification and other industrial and physical measurement recorders of other physical and chemical quantities in-use inspection.

Industrial process measurement recorder (hereinafter referred to as instrument) includes automatic potentiometer, automatic balance bridge, function record Hybrid recorders and paperless recorders combined with recorders and digital analog indicators.

2 Citations

This procedure refers to the following documents.

JJG 617-1996 "Digital Temperature Indicating Regulator Calibration Procedure" JJG 951-2000 "Verification of Calibration Instructions for Temperature Indicators" GB/T 3386-1988 "Electrical and pneumatic analog recorders and indicators for industrial process measurement and control systems can evaluate method at the time of citation, attention should be paid to the use of the currently valid version of the above cited documents.

3 Overview

3.1 Use

The meter is used to indicate and record (storage) temperature, pressure, vacuum, flow, level, oxygen, carbon A measure of the amount of industrial processes such as quantities.

When the sensor or transmitter converts the above measured measurement into a charge that the meter can accept After the voltage (current, resistance, and resistance), the meter can indirectly react to other related quantities by measuring the amount of electricity. with in this way, the meter can also directly measure and record the values of resistance, DC current and voltage.

3.2 Classification

- a) According to the structural principle. can be divided into automatic balance (such as automatic potentiometer and automatic balance bridge) and direct drive Dynamic (such as linear scale recorders and paperless recorders).
- b) According to the display mode. it can be divided into analog and digital. Analog indications (including pointer indications and rods, beams) Indication), analog recording (including scribing and dot recording); digital indication, digital recording. a recorder can it is a mixture of two ways.
- c) According to the means of recording. it can be divided into paper and paperless.
- d) According to the recording channel. it can be divided into single channel (single pen) and multi channel (multiple pen, dot instrument).
- e) According to the attached functions. it can be divided into single display and position adjustment.

3.3 Principle

3.3.1 Automatic Balanced Recorder the block diagram of the working principle of the automatic balance recorder is shown in Figure 1. It is a measurement circuit, a zero-detection amplifier, and a servo.

A closed-loop control system consisting of a motor, an indicator recording mechanism, and a scribing resistor. Recorder with position control