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

GB/T 17614.1-2015

Replacing GB/T 17614.1-2008

**Transmitters for use in industrial-process control systems --
Part 1: Methods for performance evaluation**

工业过程控制系统用变送器 第1部分：性能评定方法

(English Translation)

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Foreword

GB/T 17614 "Industrial process control systems Transmitters" is divided into three sections.

--- Part 1. Methods for performance evaluation;

--- Part 2. Inspection and routine testing methods;

--- Part 3. Evaluation Method smart transmitter.

This part of GB/T 17614 Part 1.

This section drafted in accordance with the rules of GB/T 1.1 --- 2009 and GB/T

20000.2-2009 given.

This Part replaces GB/T 17614.1-2008 "industrial process control systems Transmitters - Part 1. Methods of evaluating performance," Part Points and GB/T 17614.1-2008 major technical changes compared as follows.

- Added smart transmitter assessment content (see Chapters 1 and A.1.3);
- Simplifying terms and definitions section (see Chapter 3, Section 3 of the 2008 edition);
- Source conditions for increasing the gas source (see 4.2, 2008 version 4.1);
- Increasing the mounting position specified in the test (see Table 1 edition 1, 2008);
- Effect of static line pressure test increased by special testing requirements (see table version 1, 2008 Table 1);
- Meter model increases the peripheral system exists if model case (see Figure A.1 Note).

This section uses the translation method is equivalent to using IEC 60770-1:2010 "Industrial process control systems - Part 1 Transmitter. Performance Evaluation Method "(in English).

Consistency correspondence between this part of international documents and normative references of our files are as follows.

- GB/T 777-2008 Industrial Automation Instrumentation Analogue pneumatic signal (IEC 60382:1991, IDT);
- GB/T 2423.1-2008 Environmental testing for electric and electronic products Part 2. Test methods Test A. Cold (IEC 60068-2-1:2007, IDT);
- GB/T 2423.2-2008 Environmental testing for electric and electronic products Part 2. Test methods Test B. Dry heat (IEC 60068-2-2:2007, IDT);
- GB/T 2423.7-1995 Environmental testing for electric and electronic products Part II. Test Ec and guidance. Drop and topple (Primarily for equipment - type specimens) (idt IEC 60068-2-31. 1982);

Generic term measurements. --- GB/T 2900.77-2008 Electrotechnical terminology - Electrical and electronic measuring instruments - Part 1 [IEC 60050 (300-311).2001, IDT];

--- GB/T 2900.79-2008 Electrotechnical terminology - Electrical and electronic measuring instruments - Part 3. Electric measuring instruments Type [IEC 60050 (300-313).2001, IDT];

--- GB/T 2900.89-2012 Electrotechnical terminology - Electrical and electronic measuring instruments - Part 2. General terms of electrical measurements [IEC 60050 (300-312).2001, IDT];

--- GB/T 2900.90-2012 Electrotechnical terminology for electric and electronic

- measurements and instrumentation - Part 4. special terms of meters [IEC 60050 (300-314).2001, IDT];
- GB/T 3369.1-2008 process control systems using analog signals - Part 1. Direct current signals (IEC 60381-1. 1982, IDT);
- GB 4208-2008 housing protection (IP Code) (IEC 60529:2001, IDT);
- GB 4793.1-2007 measurement, control and laboratory use safety requirements for electrical equipment - Part 1. General requirements (IEC 61010-1:2001, IDT);
- GB/T 16511-1996 Electrical and electronic measuring equipment - Documentation (idt IEC 61187:1993);
- GB/T 16842-2008 protective shell for inspection and test equipment used with (IEC 61032:1997, IDT);
- GB/T 17614.3-2013 industrial process control systems Transmitters - Part 3. Smart Transmitter Evaluation Method (IEC 60770-3:2006, IDT);
- GB/T 17626.2-2006 Electromagnetic compatibility - Testing and measurement techniques - Electrostatic discharge immunity test (IEC 61000-4-2. 2001, IDT);
- GB/T 17626.3-2006 Electromagnetic compatibility - Testing and measurement techniques RFEMS test (IEC 61000-4-3:2002, IDT);
- GB/T 17626.4-2008 Electromagnetic compatibility - Testing and measurement techniques - Electrical fast transient burst immunity test (IEC 61000-4-4:2004, IDT);
- GB/T 17626.5-2008 Electromagnetic compatibility - Testing and measurement techniques - Surge (impact) immunity test (IEC 61000-4-5. 2005, IDT);
- GB/T 17626.6-2008 Electromagnetic compatibility - Testing and measurement techniques Immunity to conducted disturbances induced field (IEC 61000-4-6:2006, IDT);
- GB/T 17626.8-2006 Electromagnetic compatibility - Testing and measurement techniques - Power frequency magnetic field immunity test (IEC 61000-4-8. 2001, IDT);
- GB/T 17626.10-1998 electromagnetic compatibility test and measurement techniques - Damped oscillatory magnetic field immunity test (idt IEC 61000-4-10:1993);
- GB/T 17626.11-2008 Electromagnetic compatibility Testing and measurement techniques - Voltage dips, short interruptions and voltage variations resistance Interference

Test (IEC 61000-4-11:2004, IDT);

--- GB/T 17626.12-1998 electromagnetic compatibility test and measurement techniques - Oscillatory waves immunity test (idt IEC 61000-4-12.

1995);

--- GB/T 17626.16-2007 electromagnetic compatibility test and measurement technology 0Hz ~ 150kHz common mode conducted disturbances immunity test Test (IEC 61000-4-16:2002, IDT);

--- GB/T 18271.1-2000 Process measurement and control devices - General methods and procedures for evaluating performance - Part 1. General (idt IEC 61298-1:1995);

--- GB/T 18271.2-2000 Process measurement and control devices - General methods and procedures for evaluating performance - Part 2. Reference Article Under the test piece (idt IEC 61298-2:1995);

--- GB/T 18271.3-2000 Process measurement and control devices - General methods and procedures for evaluating performance - Part 3. Impact amount Impact test (idt IEC 61298-3:1998);

--- GB/T 18271.4-2000 Process measurement and control devices - General methods and procedures for evaluating performance - Part 4. Evaluation of newspaper Report content (idt IEC 61298-4:1995).

This part made the following editorial changes.

a) Remove the IEC 60770-1:2010 Foreword;

." B) with a decimal point instead of a comma as the decimal point, "";

c) to modify the original text clearly the wrong place, as shown in Table 3 "air consumption" in the "reference conditions of 0 °C, 101.3kPa" changed to "participation Than the conditions for 20 °C, 101.3kPa ".

This part is proposed by China Machinery Industry Federation.

This part of the measurement and control of Standardization Technical Committee (SAC/TC124) is administered by the National industrial processes.

This section is drafted. Beijing Far East Instrument Co., Ltd., Southwest University, Chongqing Wei detector manufacturing Co., Ltd., Xiamen Anton Electronics Co., Ltd., Beijing Jin Shi Instrument Technology Co., Ltd., Beijing Rip three yuan Instrument Co., Ltd., Fujian Shunchang Hongrun Precision Instruments have Ltd., Beijing Institute of Automation Technology, Central-day instrument Co., Ltd., Shanghai Automation Instrumentation Co., Ltd., Chongqing Electric Power Higher College, Nanjing gifted times Electric Co., Ltd., Tianjin billion Central Automation Instrumentation Technology Co., Ltd., Anhui Blue Run Automation Instrumentation Co.