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

GB/T 20819.2-2015

Replacing GB/T 20819.2-2007

**Controllers with analogue signals for use in industrial-process
control system -- Part 2: Guidance for inspection and routine
testing**

工业过程控制系统用模拟信号调节器 第2部分：检查和例行试验导则

(English Translation)

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Foreword

GB/T 20819 "industrial process control systems using analog signal conditioner" is divided into two parts.

--- Part 1. Methods for performance evaluation;

--- Part 2. Inspection and routine testing.

This is Part 2 GB/T 20819 of.

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 20819.2-2007 "industrial process control systems using analog signal controllers - Part 2. Inspection and routine Test Guidelines ", this part of the GB/T 20819.2-2007 compared to the main made editorial changes.

This section uses the translation method is equivalent to using IEC 60546-2:2010 "industrial process control systems using analog signal conditioning portion of Section 2.

Inspection and routine testing "(in English).

This part made the following editorial changes.

a) Remove the IEC 60546-2:2010 foreword and preface;

- b) supplementary normative references content (according to the text);
- c) on the part of the symbol in accordance with Chinese conversion.

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. Hangzhou Pangu Automation System Co., Ltd., Xiamen-Automation Technology Co., Ltd., Anhui Blue Run Automation Instrument Co., Ltd., Southwest University, Beijing Jin Shi Instrument Technology Co., Ltd., Beijing peacekeeping Shing New Instrument Technology Co., Ltd., Shanghai Automation Instrumentation Co., Ltd., Chongqing Electric Power College, Fuzhou Baxter Automation Equipment Co., Ltd. Nanjing gifted times Electric Co., Ltd., Fu Built Shunchang Rainbow Run Precision Instrument Co., Ltd. Anton Xiamen Electronics Co., Ltd., Zhongshan City, East Kawasaki Electric Co., Kaifeng open automation instrument

Table Co., Henan Hanwei Electronics Co., Ltd., Fujian on the Run Precision Instrument Co., Ltd., Xi'an University of Posts and Telecommunications.

1 Scope

This section GB/T 20819 is applicable to a line with an analog signal GB/T 3369.1 and GB/T 3369.2 of pneumatic and electric work Process industry regulator. This part of the test principles GB/T 20819 requirements also have other suitable for continuous signal conditioner.

This section applies to the regulator's inspection and routine testing, such as acceptance test and test after repair, to provide technical guidance. For the whole of can test should be used in the provisions of GB/T 20819.1-2015's. Quantitative performance requirements for acceptance after the manufacturer and the user should be negotiated.

The requirements of this section take effect with the approval of manufacturers and users agree after.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 20819.1-2015 industrial process control systems using analog signal conditioner - Part 1. Methods of evaluating performance (IEC 60546-1:2010, IDT)

3 Terms, definitions and symbols

Terms and definitions GB/T 20819.1-2015 defined apply to this document.

3.1 Symbols used in standard

t time;

Output value y (see Fig. 1);

y0 at t = 0 is the output value;

The measured value x (see FIG. 1);

w set value (see FIG. 1);

XP proportional band;

TI Integration time;

TD derivative time;

KP proportional action factor;

KI integral action factor;

KD derivative action factor.

4 Samples tested

If the manufacturer and user consultations tested on a sample batch, suggested the use of sampling methods IEC 60410 proposed. When sampling User-selected by inspectors test regulator.