

ICS 25.040
CCS N 18



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

GB/T 22137.1-2008

**Valve positioners for use in industrial-process control system --
Part 1: Methods of evaluating the performance of valve
positioners with pneumatic outputs**

工业过程控制系统用阀门定位器 第1部分：气动输出阀门定位器性能评定方法
(English Translation)

Issued on: June 30, 2008

Implemented on: January 1, 2009

Issued by: Standardization Administration of China

Table of Contents

Introduction

1 Scope and purpose

2 Normative references

3 Terms and definitions

4 5 General test conditions

4.1 Environmental test conditions

4.2 Conditions for source

5 General test procedures

5.1 Test Equipment

5.2 Test Method

5.3 Test Considerations

7 5.4 - Basic test layout

5.5 Initial Setup

6 Test procedure

6.1 Gain characteristics

Foreword

GB/T 22137 "industrial process control systems positioner" is divided into two parts.

--- Part 1. pneumatic positioner output performance evaluation method;

--- Part 2. intelligent valve positioners with pneumatic outputs performance evaluation method.

This section GB/T Part of 122,137.

This section identical with IEC 61514:2000 "industrial process control systems pneumatic positioner output performance evaluation method" (English Version).

For ease of use, according to GB/T 1.1-2000 "Standardization Guide Part 1. Structure and rules are written standard" for IEC 61514:2000 made the following editorial changes.

- a) it Removes the IEC 61514:2000 Foreword;
- b) Where "IEC 61514" where to "GB/T 22137.1";
- c) "This standard" to "this Part";

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

e) the standard name from "industrial process control systems pneumatic positioner output performance evaluation method" to "industrial process control system Pneumatic positioner output performance evaluation method ". Part 1 positioner system used.

This part is proposed by China Machinery Industry Federation.

This part of the measurement and control of Standardization Technical Committee first points by the National Technical Committee of industrial processes.

This section is drafted. Southwest University, China Silian Instrument Group, Shanghai Industrial Automation Instrument Research Institute, the machinery industry instrument Table Technology and Economy Institute.

Drafters of this section. Zhou Xuelian, Huang Renjie, Pandong Bo, Liu Jin, Fan Kai, Feng Xiao liters.

This section first release.

GB/T 22137.1-2008/IEC 61514:2000 Industrial process control systems positioner Part 1. pneumatic positioner output Performance Evaluation Method

1 Scope and purpose

This section provides test and evaluation of test single or double acting positioners static and dynamic performance. These tests may be used to receive Standard analog input signal (according to GB/T 3369.1, GB/T 3369.2 and GB/T 777 provisions) and a pneumatic positioner output.

Note: For pulse or digital input signal locator, you may need other appropriate criteria. The method described in this standard may be insufficient to meet with digital Locator or a pulse output of the locator application control.

During the test, the positioner can be run separately and not attached to the actuator can also be installed to connect to a specific actuator as a member run. This part requires a different way of running the place made special note.

Evaluation method specified in this section is intended for the manufacturer to determine the performance of their products, as well as users or independent testing agency to verify students Specification only produce vendor performance.

We should maintain close links between assessment bodies and manufacturers. In determining test procedures, it should pay attention to the meter manufacturer's specifications, and should seek the advice of the manufacturer test procedures and test results. Any test report issued by the manufacturer of the test should be included the results of the observations.

This section is intended to provide a locator assembly, the role and characteristics provide definitions; measurement error performance and affect the amount of these characteristics Movies Ring to establish uniform methods; provide a description for the report and the resulting measurement data evaluation result of the method.

Test conditions described in this section, such as the ambient temperature range and supply sources, etc., on behalf of the conditions usually arise. Thus, in when the manufacturer or the user does not specify other values, the value specified in this part should be used. If you use other values, it should be described. should Recognized throughout the assessment process should be carried out according to the manufacturer's installation and operating instructions and specifications.

Tests prescribed in this section is not necessarily sufficient to meet the special environmental design of the instrument. But part of the series of tests apply to comply with the appropriate limit System conditions designed instrument.

When all the parts need to press this assessment, according to the relevant part of this section will be required to test and report test results. in in this case, the test report shall state the provisions of this Part of the test items which are not included.

2 Normative references

The following documents contain provisions which, through reference GB/T 22137 in this section constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 777-2008 Industrial Automation Instrumentation Analogue pneumatic signal (IEC 60382:1991, IDT) GB/T 2423.1-2001 Environmental testing for electric and electronic products Part 2. Test methods Test A. Cold (idt IEC 68-2-1:1990) GB/T 2423.2-2001 Environmental testing for electric and electronic products Part 2. Test methods Test B. high temperature (idt IEC 60068-2-2. 1974) GB/T 2423.7-1995 Environmental testing for electric and electronic products Part II. Test Ec and guidance. Drop and turn Down (Primarily for equipment - type specimens) (idt IEC 68-2-31. 1982) GB/T 2423.9-2001 Environmental testing for electric and electronic products Part 2. Test methods Test Cb. Damp heat, equipment GB/T 22137.1-2008/IEC 61514:2000