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

GB/T 12223-2023

Replacing GB/T 12223-2005

Part-turn valve actuator attachments

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foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents"

drafting:

This document replaces GB/T 12223-2005 "Connection of Part-turn Valve Actuators":
Compared with GB/T 12223-2005, except

Apart from editorial changes, the main technical changes are as follows:

a) Changed the range and added a schematic diagram of the connection surface between the part-turn output drive and the valve (see Chapter 1, 2005 edition

Chapter 1);

b) Added the terms and definitions of "multi-turn drive" and "gearbox" (see Chapter 3, Chapter 3 of the 2005 edition);

c) The flange codes and related dimensions of F80 and F100 are added (see Table 1~Table 4);

d) Changed the representation method of the flange code (see Chapter 6, Chapter 4 of the 2005 edition);

e) Added improved flat head connection and size requirements (see 7:5);

f) Added involute spline connection and size requirements (see 7:6);

g) Added square mortise and key connection and size requirements (see 7:7);

h) Added the requirement of 180° double bond position (see Chapter 8);

i) The requirements for positioning pins have been added (see Chapter 9):

This document is modified to adopt ISO 5211:2017 "Connection of Part-turn Valve Actuators for Industrial Valves":

The technical differences between this document and ISO 5211:2017 and their reasons are as follows:

a) Deleted the description of the part-turn drive device connection of the control valve not involved in this document in the scope (see Chapter 1);

b) The terms and definitions of "flange code" (see 3:6) have been added to meet the needs of our country in practical applications;

c) The thread requirements for flange connections have been changed, and ISO 273 (see 5:1) has been replaced by the normatively quoted GB/T 196 to meet the requirements of my country's

needs in practical applications;

d) Change "Materials whose yield strength Re is less than or equal to 200MPa should be agreed upon by both parties" to "Yield strength Re less than

The material of 200MPa should be negotiated by both the supplier and the buyer" (see 5:4) to meet the needs of our country in practical applications;

e) Change "The size or torque of the flange code above F60 shall be agreed between the supplier and the buyer" to "Flange code above F100

The size or torque should be agreed upon by both parties" (see 5:7) to meet the needs of our country in practical applications;

f) The size of the key is added to refer to the requirements of GB/T 1095 (see 7:2:2) to meet the needs of practical applications in my country;

g) Replaced ISO 4156-1 (see 7:6) with the normatively quoted GB/T 3478:1 to meet the application needs of our country;

h) The note to 7:6 has been placed in the text (see 7:6):

The following editorial changes have been made to this document:

--- Change the name of the document to "Connection of Part-turn Valve Actuator":

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

1 Scope

This document specifies requirements for the connection of part-turn actuators to industrial valves:

include:

--- Partial rotation connected with industrial valves [see Figure 1a) and Figure 1c)] or intermediate connection support [see Figure 1b) and Figure 1d)]

The flange size necessary for the drive unit;

--- Structural form and size of the driving part of the part-turn driving device necessary to connect with the driven part;

---The size of the flange connecting surface directly connected with the industrial valve and the torque reference value of the connecting flange:

This document applies to the connection dimensions of part-turn valve actuators to valves:

This document does not apply to the connection dimensions of intermediate supports and valves:

Note 1: "Valve" in this document includes "valve with intermediate support" [see Figure 1b)]:

Note 2: When the part-turn drive consists of a multi-turn drive and an integral part-turn gearbox, it is in accordance with the provisions of this document, see Figure 1a) and

Figure 1b): When the part-turn drive consists of a multi-turn drive with a separate part-turn gearbox, connected to the gearbox

The multi-turn drive device is in accordance with the provisions of GB/T 12222, see Figure 1c) and Figure 1d):

a) Direct connection b) Connection with support in the middle c) Combined direct connection d) Combined connection with support in the middle

Description of index number:

1---Part-turn driving device; 5---Gear box;

2---connection surface (see this document for partial rotation); 6---connection surface (see GB/T 12222 for multi-turn);

3---valve; 7---multi-turn drive device:

4--- There is a support connection in the middle;

Figure 1 Connection surface between part-turn drive and valve

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references