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GB/T 24922-2010

Technical specification for flameproof electric valve actuators

隔爆型阀门电动装置技术条件

Issued on: August 9, 2010 **Implemented on: December 31, 2010**

Issued by: General Administration of Quality Supervision, Inspection and Quarantine;
Standardization Administration of the PRC

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Foreword

The standard proposed by China Machinery Industry Federation. The standard valve by the National Standardization Technical Committee (SAC/TC188) centralized. This standard is mainly drafted by: Hefei General Machinery Research Institute, Tianjin Baili Machinery Co., Ltd., located in Tianjin Ai Kete valve control Preparation Co., Ltd., China Teflon Group, Huangshan Liang industry Valve Co., Ltd., Yangzhou Power Equipment built factory, Changzhou Power Station Auxiliary Equipment Plant Limited. The main drafters of this standard. Huang Minya, Wang Lei, Cao record type, Lijin Shuo, Liu Huaifu, item Megan, Zhule Yao Jiang New Year, Chen Huaxiang, ZHAO. Flameproof electric valve actuators technical conditions

1 Scope

China's national technical specification for flameproof electric valve actuators. It specifies the types and basic parameters, the technical requirements, the test methods, the inspection rules and the marking, packaging, transport and storage of electric valve actuators of flameproof construction. An electric actuator is the motor and gearbox bolted to a valve that opens and closes it on command, and in a refinery, a chemical plant, an offshore installation or a gas facility it has to do that inside a hazardous area - a place where a flammable atmosphere may be present. An ordinary motor cannot be used there: it contains a source of ignition in the winding, the switchgear and the brushes if it has them, and it breathes as it heats and cools. Flameproof construction is one of the two ways round that and it is the blunt one. The equipment is not prevented from igniting the gas inside it; it is built so that when it does, the explosion is contained. The enclosure withstands the internal pressure without rupturing, and every joint and shaft entry is a flame path long enough and tight enough that the burning gas cools below the ignition temperature of the surrounding atmosphere before it escapes. That is why the standard's distinctive requirements are dimensional: the flame path lengths and gaps, the fastener strength and the number of threads engaged, the shaft seals, and the pressure the enclosure must withstand. Around them sit the requirements of the actuator as a machine - the torque and thrust ratings, the travel and torque limit switches which are what actually protect the valve, the position indication, the manual override, the duty rating, the enclosure ingress

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protection and the environmental range. Issued on 9 August 2010 and in force since 31 December 2010.

This standard specifies the flameproof electric valve actuators (hereinafter referred to as explosion-proof electric apparatus) terms and definitions, technical requirements, test side Method, inspection rules, marking, packaging and storage. This standard applies to the type of protection is d, category II class, explosive gas mixture A, B, C three, maximum allowable surface temperature Design of electrical installations 85 °C (T6) ~ 135 °C (T4), manufacturing and testing.

2 References

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB 3836.1-2000 Electrical equipment for explosive gas atmospheres - Part 1. General requirements (eqv IEC 60079-0.1998)

GB 3836.2-2000 Electrical apparatus for explosive gas atmospheres - Part 2. flameproof "d" (eqv IEC 60079-1.1990)

GB 3836.3-2000 Electrical equipment for explosive gas atmospheres Part 3. Increased Safety "e" (eqv IEC 60079-7.1990)

GB 4208-2008 housing protection (IP Code) (IEC 60529.2001, IDT)

GB/T 24923-2010 common type valve electric device technology

JB/T 8670-1997 YBDF2 series of electric valve actuators induction motors for explosion-proof three-phase

3 Terms and Definitions

The following terms and definitions apply to this standard.

3.1 Explosion-proof type typeofprotection Specific measures taken to protect electrical equipment from causing ignition of a surrounding explosive atmosphere taken.

3.2 Explosive atmosphere potentialyexplosiveatmosphere Explosive atmospheres may occur.

3.3 Explosive gas atmospheres explosivegasatmosphere Under atmospheric conditions, the mixture of air and combustible material gas, vapor or mist formed, the mixture is ignited, the combustion will spread Environmental entire unburned mixture.

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3.4 Flameproof enclosure flameproofenclosure One kind of type of protection for electrical equipment. Penetrate the shell can withstand any joints or structural gap to the interior of the housing shell can Combustible mixture in an internal explosion without damage, and does not cause the outer one of a variety of gases or vapors to ignite an explosive atmosphere formed.

3.5 Flameproof joint flameproofjoint Flameproof enclosure surface corresponding to the different parts fit together (or shell connections) and the flame or the products of combustion from the outside may thus Reached the interior of the shell portion outside the housing.

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