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**Guidelines for the ordering and acceptance of steam traps in
thermal power plants
(English Translation)**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009 "Guidelines for Standardization Work Part 1: Standard Structure and Compilation".

Appendix A of this standard is an informative appendix.

This standard was proposed by the China Electricity Council.

This standard is under the jurisdiction and interpretation of the Power Plant Valve Standardization Technical Committee of the Power Industry.

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1 Scope

This standard specifies requirements for ordering and acceptance of steam traps for thermal power plants.

This standard is applicable to ball valves and globe valves for drainage of thermal power plants with a nominal size of DN15~DN100 and a nominal pressure not greater than PN760.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this document.

For undated references, the latest version (including all amendments) applies to this document.

GB/T 1221 Heat-resistant steel bar GB/T 3766 Hydraulic actuator GB/T 4622 spiral wound gasket GB/T 6394 Method for determination of average grain size of metals GB/T 7932 pneumatic actuator GB/T 10561 Determination of the content of non-metallic inclusions in steel, grading chart, microscopic inspection method GB/T 12221 flange connection metal valve structure length GB/T 12223 Part-turn valve drive connection GB/T 12224 General requirements for steel valves GB/T 12228 General Valve Carbon Steel Forging Technical Conditions GB/T 14383 Forged socket welding and threaded pipe fittings GB/T 14992 Classification and designation of high temperature materials for high temperature alloys and intermetallic compounds GB/T 24922 Explosion-proof valve electric device technical conditions GB/T 24923 Technical requirements for ordinary valve electric devices GB/T 26480 Inspection and testing of valves GB 26640 Specification for minimum wall thickness of valve housing DL/T 439 Technical Guidelines for High Temperature Fasteners in Thermal Power Plants DL/T 531 Technical conditions of high temperature and high pressure stop valve for power station DL/T 869 Welding technical specification for thermal power plant JB/T 6439 Magnetic particle inspection of die-cast steel parts of valves JB/T 6902 valve liquid penetration test JB/T 6903 Ultrasonic Inspection Method for Valve Forgings JB/T 7370 flexible graphite braided packing JB/T 12000 Technical requirements for pressure-bearing steel forgings for thermal power supercritical and ultra-supercritical valves JB/T 12387 High temperature and high pressure ball valve for power station NB/T 47008 Carbon steel and alloy steel forgings for pressure equipment NB/T 47010 stainless steel and heat-resistant steel forgings for pressure equipment NB/T 47044 Power Station Valve

3.1 General requirements

3.1.1

A manufacturing unit that holds a special equipment pressure piping component manufacturing license and the license conforms to the product should be selected for ordering.

3.1.2

The purchaser shall provide the supplier with a detailed description of the project overview and product operating environment when placing an order.

3.1.3

The product ordering data sheet should be filled in when placing an order. See Appendix A for the product ordering data sheet. The order data in Table A.1 is filled in by the design institute, the buyer, the supplier and other related parties jointly complete it.

3.2 Technical requirements

3.2.1

The overall requirements for the design and manufacture of traps should meet the requirements of NB/T 47044, and the design and manufacture of traps should meet DL/T According to the regulations of 531, the drain ball valve should meet the regulations of JB/T 12387.

3.2.2

The pressure and temperature ratings of the traps should meet the requirements of GB/T 12224.

3.2.3

The structural length dimension of the trap should meet the requirements of GB/T 12221, or be negotiated by both the supplier and the buyer.

3.2.4

The trap shall be connected by socket welding or butt welding. The socket welding connection end shall meet the requirements of GB/T 14383; the butt welding connection end shall conform to the Comply with the provisions of GB/T 12224, or be negotiated by both parties.

3.2.5

For all pressure-bearing shells in contact with the medium, the corrosion allowance caused by the corrosion of the medium to the metal shall be considered, and the minimum wall thickness shall comply with GB 26640 Provisions.

3.2.6

The hardened material of the sealing surface is high temperature resistant hard alloy.

3.2.7

The surface hardness of the sealing surface material of the ball valve sphere and valve seat is $\geq$ HRC60, and the surface hardness of the sealing surface material of the stop valve disc and the valve seat $\geq$ HRC40.

3.2.8

Corresponding hardening treatment measures should be taken on the surface of the valve stem to ensure that there is a hardness difference of 50HB between the surface of the valve stem and the valve stem guide sleeve.

3.2.9

The valve stem bushing should have a structure to prevent the valve stem from escaping and the valve stem is positioned radially. The valve stem should be designed to prevent blowing out.

3.2.10

The packing structure should adopt at least one ring of flexible graphite packing braided with stainless steel wire or corrosion-resistant alloy wire at the top and bottom, and the middle is placed Forming flexible graphite pressure ring packing.

3.2.11

The stuffing box of the high pressure drain ball valve shall be equipped with a metal anti-extrusion ring.

3.2.12

For traps with pressure self-sealing structure with $DN \leq 50$, the sealing ring should be a metal sealing ring.

3.2.13

The valve electric device shall meet the requirements of GB/T 24922 and GB/T 24923.

3.2.14

The connection size of the valve drive device should meet the requirements of GB/T 12223.

3.2.15

The design of pneumatic actuators should meet the requirements of GB/T 7932.

3.2.16

The design of hydraulic actuators should meet the requirements of GB/T 3766.