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**INDUSTRY STANDARD OF THE  
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**Guide for the maintenance of power plant valve -- Part 2:  
Butterfly valve  
(English Translation)**

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### Foreword

"Guidelines for Overhaul of Power Station Valves" is divided into eight parts.

--Part 1: General Provisions

--Part 2: Butterfly Valve

--Part 3: Check Valve

--Part 4: Ball Valve

--Part 5: Gate Valve, Globe Valve

--Part 6: Safety valve

--Part 7: Regulating Valve

--Part 8: Special valves for power stations

--Part 9: Driving Device this part is Part 2 of "Guidelines for Overhaul of Power Station

Valves".

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

This part was proposed by the China Electricity Council.

This part is under the jurisdiction of the Power Plant Valve Standardization Technical Committee.

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## 1 Scope

This standard specifies the procedures, process requirements and quality standards for the maintenance of butterfly valves in power stations.

This standard applies to butterfly valve maintenance of water, steam, oil, air and other piping systems in thermal power plants. For other butterfly valve maintenance, please refer to Row.

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

GB/T 21465 Valve Terminology DL/T 438 Metal Technology Supervision Regulations for Thermal Power Plants DL/T 746 Selection Guide for Butterfly Valves in Power Stations DL/T 869 Welding technical specification for thermal power plant JB/T 5779.1 General requirements for surface defects of fasteners, bolts, screws and studs JB/T 5779.2 Fastener surface defect nut JB/T 5779.3 Special requirements for bolts, screws and studs on surface defects of fasteners NB/T 47044 Power Station Valve

## 3 Terms and definitions

The terms and definitions in GB/T 21465, DL/T 746, and Part 1: General Rules apply to this standard.

## **5.1 Valve maintenance process**

Valve maintenance should be carried out in accordance with the maintenance process, and the maintenance process should meet the requirements of Figure 6.

Figure 6 Valve maintenance process

## **5.2 Preparation for maintenance**

### **5.2.1**

The preparations for butterfly valve maintenance shall comply with the requirements of Part 1 of the general rules of the power station valve maintenance guidelines.

### **5.2.2**

Before maintenance, the valve power supply should be released, hydraulic or pneumatic actuators should be depressurized, and they should be in a safe position.

### **5.2.3**

For the drive device with spring or hydraulic energy storage components, ensure that the energy has been released and that no automatic opening and closing actions will occur after the power is cut off.

### **5.2.4**

Maintenance personnel should understand the operating conditions and installation positions of the butterfly valve, carefully read the "Product Manual" and related technical drawings and documents, and formulate Butterfly valve assembly and disassembly process.

## **5.3 Disassembly of butterfly valve**

### **5.3.1**

Before the butterfly valve is disassembled, a technical diagnosis should be carried out to check the internal leakage, external leakage, looseness of the butterfly pin, sealing surface fit, and surface damage.

Clarify the current main problems of the valve. If the valve parts are seriously damaged and the valve has no repair value, the repair work will not be carried out.

Discontinue the valve maintenance program.

### **5.3.2**

The valve should be disassembled at the slightly open position, and all parts should be marked after disassembly.

### **5.3.3**

For butterfly valves with heavy hammers, the heavy hammers should be removed first.

### **5.3.4**

Disconnect the hydraulic system and electrical control system, remove the valve electrical external wiring (if any), and the hydraulic system connection pipeline (if any).

### **5.3.5**

Remove the transmission device (including electric device).

### **5.3.6**

Remove the valve shaft, separate the valve body, butterfly plate, bearing, bushing, end cover, packing; for other parts, such as sealing pressure plate, sealing Disassemble the sealing ring.

### **5.3.7**

Place the removed valve parts in an orderly manner and mark them as necessary. The removed valve parts should be covered during non-working periods.

Parts should be stored away from moisture, and precision parts should be packaged for storage.

### **5.3.8**

For the case of pressing ring segments, the installation position of each pressing ring shall be recorded in detail and marked.

### **5.3.9**

For all hydraulic ports and pneumatic ports, the pipe ports shall be effectively blocked to prevent foreign matter from entering.

## **5.4.1 Surface defect inspection**

### **5.4.1.1**

Before the inspection, remove the rust and grease on the surface of the parts, and apply anti-rust oil to the processed surface.

### **5.4.1.1**

Visually inspect the inner and outer surfaces of the valve, sealing surface, valve shaft matching surface, flange surface, bearing and other surfaces, and combine with appropriate tools Tool for surface appearance defect inspection, items and criteria meet the error! The reference source was not found. Provisions.