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

GB 18173.2-2014

**Polymer water-proof materials - Part 2: Waterstop
(English Translation)**

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Foreword

Chapters 4 and 7 of this Part are mandatory, while others are recommended.

GB 18173 Polymer water-proof materials is divided into the following 4 parts.

- Part 1. Water-proof sheet;
- Part 2. Waterstop;
- Part 3. Hydrophilic expansion rubber;
- Part 4. Rubber gasket for shield-driven tunnel.

This Part is Part 2 of GB 18173.

This Part was drafted in accordance with the rules given in GB/T 1.1-2009.

This Part replaces GB 18173.2-2000 Polymer water-proof materials - Part 2.

Waterstop. The major differences between this Part and GB 18173.2-2000 are as follows.

- MODIFY and ADD the classification method of the waterstop (SEE Section 3.1 of this Part, Section 3.1 of 2000 edition);
- MODIFY the marking method of the waterstop (SEE Section 3.2 of this Part, Section 3.2 of 2000 edition);
- MODIFY and ADD the schematic diagram for the waterstop structure

(SEE Section 4.1 of this Part, Section 4.1 of 2000 edition);

- MODIFY the requirements for the appearance quality of the waterstop

(SEE Section 4.2 of this Part, Section 4.2 of 2000 edition);

- ADJUST and ADD the physical property indicators of the waterstop (SEE Section 4.3 of this Part, Sections 4.3 and 4.4 of 2000 edition);

- MODIFY the test method of rubber and metal adhesion properties (SEE Section 5.3.9 of this Part, Section 5.3.9 of 2000 edition);

- MODIFY the group-batching and sampling of the waterstop (SEE Section

6.1.1.1 of this Part, Section 6.1.1.1 of 2000 edition);

- MODIFY the inspection items of the waterstop (SEE Section 6.1.1.2 of this Part, Section 6.1.1.2 of 2000 edition);

- ADD the requirements for periodic inspection of the waterstop (SEE Section 6.1.3 of this Part);

- MODIFY the determination rules of the waterstop (SEE Section 6.2 of this Part, Section 6.2 of 2000 edition);

- ADD the requirements for the storage temperature of the waterstop (SEE Section 7.3 of this Part).

This Part was proposed by the China Petroleum and Chemical Industry Federation.

This Part shall be under the jurisdiction of the Technical Subcommittee for Rubber Sundries of National Technical Committee for Standardization of Rubber and Rubber Products (SAC/TC 35/SC 7).

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Co., Ltd, Sino Rubber Technology Co., Ltd, Hengshui Best Gold Composite
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The previous released edition substituted by this Part is as follows.

- GB 18173.2-2000.

Polymer water-proof materials - Part 2. Waterstop

1 Scope

This Part of GB 18173 specifies the classification and markings, requirements, test methods, inspection rules, symbols, packaging, transportation and storage of the waterstops made of polymer water-proof materials.

This Part is applicable to all or part of the rubber waterstops poured in the concrete or adhered to the concrete surfaces, composite waterstops with hydrophilic expansion rubber, rubber waterstops with steel edges, and rubber waterstops and rubber composite waterstops for the pipe joints of immersed tunnels (hereinafter referred to as "waterstops").

2 Normative references

The following documents are essential to the application of this document. For dated references, only the editions with the dates indicated are applicable to this document. For undated references, only the latest editions (including all the amendments) are applicable to this document.

GB/T 528 Rubber, vulcanized or thermoplastic - Determination of tensile stress-strain properties

GB/T 529 Rubber, vulcanized or thermoplastic - Determination of tear strength (trouser, angle and crescent test pieces)

GB/T 531.1 Rubber, vulcanized or thermoplastic - Determination of indentation hardness - Part 1. Durometer method (Shore hardness)

GB/T 532 Rubber, vulcanized or thermoplastic - Determination of adhesion to textile fabric

GB/T 2941 Rubber - General procedures for preparing and conditioning test pieces for physical test methods

3.1.1 The waterstops can be divided into three categories according to the applications.

3.1.2 The waterstops can be divided into two categories according to the structure type.

3.2.2 Marking examples

Example 1. Composite waterstops with steel edges for construction joints, which are 300mm wide and

8mm thick, shall be marked as. S-FG-300 x 8.

4.1 Dimensional tolerances

The schematic diagram for the waterstop structure is shown in Figure 1. The dimensional tolerances of the waterstop shall conform to the provisions of Tables 1 and 2.

4.2.1 The deviation of waterstop's center hole is not allowed to exceed 1/3 of the design value of the wall thickness.

4.2.2 It is not allowed to have cracks and sponge-like defects on the waterstop surfaces.

4.3.1 The physical property requirements and corresponding test methods for the rubber materials of waterstops shall conform to the provisions of Table 3.