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QB

**LIGHT INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

QB/T 2664-2023

**Enamelled plumbing fixtures - Bathtubs
(English Translation)**

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1 Scope

This document specifies the requirements for dimensional tolerance, metal strain, appearance, enamel coating thickness, physical and chemical properties of enamelled bathtubs, describes the corresponding test methods, stipulates the inspection rules, marking, packaging, transportation and storage contents, and provides product classification and marking to facilitate technical regulations.

This document applies to the production, inspection and sales of enamelled bathtubs (cast iron enamelled bathtubs, sheet steel enamelled bathtubs).

2 Normative references

The provisions of the following documents constitute the essential clauses of this document through normative references in this text. Among them, for referenced documents with dates, only the versions corresponding to the dates are applicable to this document; for referenced documents without dates, the latest versions (including all amendments) are applicable to this document.

GB/T 2828.1 Sampling procedures for inspection by attributes - Part 1. Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

GB/T 4956 Non-magnetic coatings on magnetic substrates - Measurement of coating thickness - Magnetic method

GB/T 7410 Terms of vitreous and porcelain enamels

GB/T 9989.1 Vitreous and porcelain enamels - Determination of resistance to chemical corrosion - Part 1. Determination of resistance to chemical corrosion by acids at room temperature

GB/T 9989.3 Vitreous and porcelain enamels - Determination of resistance to chemical corrosion - Part 3. Determination of resistance to chemical corrosion by alkaline liquids using a hexagonal vessel

QB/T 1855 Enamelled ware noncontact with food - General requirements

3 Terms and definitions

The terms and definitions defined in GB/T 7410 and the following apply to this document.

3.1

upper edge surface

The uppermost flat part of a bathtub.

NOTE: As shown in Figure 1.

3.2

apron

The part that is provided due to the requirements of product design and is drooped from the upper edge surface (3.1) and is integrated with the bathtub.

NOTE: As shown in Figure 1.

3.3

waste hole

A hole provided for draining water from a bathtub.

NOTE: As shown in Figure 1.

3.4

overflow hole

A water outlet provided on the upper part of the inner side of the bathtub to prevent the water in the bathtub from overflowing from the upper edge surface (3.1).

NOTE: As shown in Figure 1.

3.5

visible surface

After installation, the surface that can be visually inspected.

3.6

underside

Visible surface (3.5) at the bottom of the bathtub.

NOTE: As shown in Figure 1.

3.7 A surface

The uppermost visible surface of the bathtub (3.5).

NOTE: As shown in Figure 2.

5.1.1.1 Base substrate material

It shall be one-piece cast from cast iron material, solid, complete, and accurately formed, without dense holes, cracking, or other defects that affect enameling and performance.

The cast iron thickness shall not be less than 3.2 mm at a distance of more than 25 mm from the edge.

5.1.1.2 Slope

The slope of the bathtub underside towards the waste hole shall be 21 mm/m~36 mm/m.

5.1.1.3 Drainage

After the test in 6.1.2, the maximum diameter of a single piece of retained water at the bottom of the bathtub shall not be greater than 10 cm, and there shall not be two or more such pieces of retained water at the same time.

5.1.2 Dimensional tolerance

The tolerance for the maximum length, maximum width, and depth of the bathtub is ± 7 mm.

5.1.3 Metal strain

The metal strain of the upper edge surface and edges shall not be greater than 5 mm/m.

NOTE: No requirements for products with special shapes.

5.1.4 Appearance

5.1.4.1

There shall be no serious defects that affect the functions, such as peeling, pinholes penetrating into the base substrate, jumping, or crazing, or defects that significantly affect the appearance. The enamel coating shall have a smooth surface (except for the non-slip surface) and a uniform color.

5.1.4.2

The allowable range of minor defects for cast iron enamelled bathtubs shall comply with the provisions of Table 1.

After the test in 6.6.6, the visible surface enamel shall not be lower than grade A+.

5.1.6.7 Alkali resistance

5.1.6.7.1

The surface of the porcelain enamel shall not be chalky after the visible surface enamel is etched by the sodium carbonate solution at room temperature as specified in

6.6.7.1.

5.1.6.7.2

After the visible surface enamel (a flat specimen cut from the product or a sample made of the same material and processed under the same conditions as the product) is tested as specified in 6.6.7.2, the weight loss shall not be greater than 0.8 mg/cm².

5.2.1.1 Base substrate material

The thickness of the steel plate before forming shall not be less than 1.6 mm. If required by the product structure, a thinner steel plate (thickness not less than 1.3 mm) may be selected, provided that the requirements of 5.2.3, 5.2.6.3 and 5.2.6.4 are met; the thickness of the apron shall not be less than 1.1 mm.

5.2.1.2 Slope

The slope of the bathtub underside towards the waste hole shall be 10 mm/m~40 mm/m.

5.2.1.3 Drainage

After the test in 6.1.2, the maximum diameter of a single piece of retained water at the bottom of the bathtub shall not be greater than 10 cm, and there shall not be two or more such pieces of retained water at the same time.

5.2.2 Dimensional tolerance

The tolerance for the maximum length, maximum width, and depth of the bathtub is ± 5 mm.

5.2.3 Metal strain

The metal strain of the upper edge surface and edges shall not be greater than 5 mm/m.

NOTE: No requirements for products with special shapes.