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

**中华人民共和国行业标准**

NB/T 47016-2011 (JB/T 4744)  
Replace JB 4744-2000

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**Mechanical Property Tests of Product  
Welded Test Coupons for Pressure  
Equipments**

**承压设备产品焊接试件的力学性能检验**

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## Foreword

The main changes of this standard over "Mechanical property tests of product welded test coupons for steel pressure vessels" JB 4744-2000 and "Methods of mechanical property test for boiler pressure parts welded joints" JB/T 1614-1994 are as follows:

- The product welded test panel is modified into product welded test coupons;
- The application scope is enlarged from pressure vessels to boiler, pressure vessels and pressure piping;
- Aluminum, titanium, copper and nickel product welded coupons are added and tubulous coupons are added;
- "Symbol" of Chapter 3 in JB 4744-2000 is deleted and "General Provisions" is increased;
- Preparation of coupons is modified in Chapter 5;
- The Category, sampling quantity and position of coupon mechanical property inspection are modified in Chapter 6;
- Methods of tensile test and qualified indexes are modified in Chapter 7; dimensions and test methods of bending samples are modified; sampling point, quantity, inspection item and qualified indexes of impulse test are modified;
- The requirements of reinspection in Chapter 8 are modified.

This standard will replace the relevant contents in JB 4744-2000 and JB/T-1614 from the implementation date.

This standard was proposed by and under the jurisdiction of the National Technical Committee on Boilers and Pressure Vessels of Standardization Administration of China (SAC/TC 262).

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National Technical Committee on Boilers and Pressure Vessels of Standardization Administration of China (SAC/TC 262) is in the charge of the explanation of this standard.

The previous editions of the standard replaced by this standard are as follows:

-JB 4744-2000; JB/T 1614-1994.

# **Mechanical Property Tests of Product Welded Test Coupons for Pressure Equipments**

## **1 Scope**

This standard specifies the preparation, sample preparation, inspection method and qualified indexes for pressure equipments (boiler, pressure vessels and pressure piping) product welded coupons.

This standard is applicable to the inspection of mechanical property and bending property for steel, aluminum, titanium, copper and nickel pressure equipments product welded coupons.

The product welded coupons include product weld test plate, product inspection coupons, simulating loop and certification loop.

This standard is not applicable to gas cylinders.

## **2 Normative Reference**

The following referenced documents are indispensable references, only the edition cited applies. For dated references, only the dated edition of the normative reference referred to applies. For the undated normative references, the latest editions (including all amendments) apply.

GB/T 228 Metallic Materials-Tensile Testing

GB/T 229 Metallic Materials -Charpy Pendulum Impact Test Method

GB/T 2653 Bend Test Methods on Welded Joints

NB/T 47014 Welding Procedure Qualification for Pressure Equipment

## **3 General Provisions**

**3.1** In addition to the requirements of this standard, the inspection of mechanical property for product welded coupons shall also in accordance with the relevant requirements of safety technical codes, standards and design documents.

**3.2** Materials used for coupons shall be of the same standard, code (mark and steel grade), specification (only for thickness and outside diameter) and heat treatment state with materials used for components of pressure equipments. Where 06Cr13Al steel is adopted to weld pressure equipments and post-weld heat treatment is not carried out, the base metal of coupons shall include steel plate of each furnace number.

**3.3** The pressure equipments product welded coupons are classified into plate coupons and tubulous coupons. Tubulous refers to pipeline and loop.

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