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

CJ/T 163-2002

Replacing CJ/T 163-2002

**The storage type heat exchanger of guide flow type and half
storage type heat exchanger
(English Translation)**

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Table of Contents

Preface
1 Scope
2 Normative references
3 Terms and definitions
4 Model markings and the main structure
4.1 Type Marking
4.2 The main structure
5 Technical parameters
5.1 Design Selection parameters
5.2 Thermal parameters
6 Requirements
7 Test methods
8 Inspection rules
9 Factory documentation, marking, painting, packaging and shipping
Appendix A (Informative) Water heating gas thermal performance test method

Foreword

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

This standard is the revision of CJ/T 163-2002 "diversion type positive displacement water heaters and semi-positive displacement water heaters (U-tube bundle)", this Compared with CJ/T 163-2002, the main technical changes are as follows.

- Updated "reference standard" version;
- Complement the "check hole" standard;
- Supplemented the smooth U-shaped, nodal U-tube bundle definition;
- Complement the smooth tube, knot tube diversion type volumetric water heater definition;
- Supplemented the smooth tube, knot tube semi-volume water heater definition;
- Complement the knuckle surface U-tube water heater model mark;
- Complement the knot surface U-tube water heater corresponding thermal parameters;

- Remove the U-shaped heat transfer tubes with seamless steel pipe provisions;
- Unified shell-side, the pressure of the design process;
- Complement the semi-volume water heaters manhole settings and manufacturing requirements;
- Complement the knot section U-tube bundle structure and processing requirements.

This standard proposed by the Ministry of Housing and Urban Standard and Design Institute.

This standard by the Ministry of Housing and Urban Water Supply and Drainage Standardization Technical Committee building centralized.

This standard was drafted. China Architectural Design Institute Co., Ltd., Zhejiang Hangzhou Special Container Co., Ltd., Beijing Wanquan pressure vessel plant, Hebei deep State Thermal Equipment Co., Ltd.

1 Scope

This standard specifies the U-shaped tube bundle for the heat transfer components of the diversion type volumetric water heaters and semi-volume water heater terms and set Meaning, model marks and main structure, technical parameters, requirements, test methods, inspection rules, factory documents, signs, paint, packaging and transportation.

This standard applies to diversion-type volumetric water heaters and semi-volume water heaters (hereinafter referred to as "water heaters") the design, manufacture, Inspection and testing.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB 150-2011 pressure vessels GB 151-1999 shell and tube heat exchanger GB 713 boiler and pressure vessel steel GB/T 1527 copper and copper alloy drawn pipe GB/T 3274 carbon structural steel and low alloy structural steel hot-rolled thick steel plate and strip GB/T 4237 stainless steel hot-rolled steel sheet and strip GB/T 12771 stainless steel welded steel pipe for fluid transport GB/T 13306 signs Stainless steel seamless pipe for fluid transport Pressure stainless steel plate and strip for pressure equipment GB/T 25198 pressure vessel head HG/T 20592 steel pipe flange HG/T 21516-2005 Swing cover flat welding flange manholes HG/T 21519-2005 vertical hanging plate flat welding flange manholes JB/T 4711 Pressure Vessel Coating and Transport Packaging Container support terms and definitions JB/T 4730 pressure equipment non-destructive testing JB/T 4736

reinforcement circle Explosive welded composite panels for pressure vessels Pressure
welding equipment assessment of the technology Pressure vessel welding procedures
NB/T 47021-2012 A flat welding flange Fixed pressure vessel safety technology supervision
procedures