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

中华人民共和国机械行业标准

JB/T 10087-2001

**Specification for steel casting of steam turbines
for pressure purposes**

水利水电工程钢闸门设计规范

Issued on August 30, 2001

Implemented on February 01, 2002

Issued by China Machinery Industry Federation

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Foreword

The standard is a revision for JB/T 10087-1999 *Specifications for steel casting of steam turbines* according to ISO 4990:1986 *General technical delivery specifications for steel casting*, EN 10213:1995 *Technical delivery specifications for steel casting of pressure purposes* and ASTM A356/A356M:1998 *Thick-walled carbon steel, low alloy steel and stainless steel castings of steam turbines*. To highlight the special requirements for steel casting of steam turbines, (primarily to the specific requirements of steel casting for pressure purposes), it is renamed *Specifications for steel casting of steam turbines for pressure purposes*.

The major disparities of the Standard with that of JB/T 10087-1999 and JB/T 10087-2001 are as below:

- Delete castings in the primary standard according to the importance of using.
- The standard name is changed into Specifications for steel casting of steam turbines for pressure purposes.
- Delete ZG270-500 carbon steel. ADD the order requirements, test & inspection and normative annexes.
- The contents of chemical compositions S, P of carbon steel are changed from 0.04% into 0.035%.
- Alter the chemical composition and the amount of residual aluminum of alloy steel accordingly.
- The impact toughness value of impact property in the primary standard is changed into impact absorbing energy. There are corresponding provisions regarding to impact absorbing energy.

This standard is a replacement for JB/T 10087-1999 *Specifications for steel casting of steam turbines*, implemented from February 1, 2002.

The Annex A is normative annex and the Annex B is informative annex.

This standard is proposed by National Technical Committee on Steam Turbines of Standardization of China.

This standard is under the jurisdiction of National Technical Committee on Steam Turbines of Standardization of China.

This standard is drafted by: Wuhan Steam Turbine Power Plants and DongFang Steam Turbine Works.

Main drafter of this standard: Zhu Liansheng, Liu Jingdong, Rao Hongbing, Yang Ruifu, Yu Jian.

This standard is issued in 1983 for the first time, first revised in April, 1990.

Specification for steel casting of steam turbines for pressure purposes

1 Scope

This standard specifies provisions of technical requirements, testing and inspecting methods, mark and certificate of qualification of pressure steel casting of steam turbines (including air cylinder, stop valve, control valve, steam cabinet, nozzle box, etc.).

This standard is applicable to the order, manufacture and inspecting of pressure steel casting of steam turbines. The steel casting of steam turbines with over and including 300MW cylinder block shall not be applicable to this standard.

2 Normative References

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB/T 222-1984 Method of sampling steel for determination of chemical composition and permissible variations for product analysis

GB/T 223-1982-1997 Methods for chemical analysis of iron, steel and alloy

GB/T 228-1987 Metallic materials--Tensile testing at ambient temperature

GB/T 229-1994 Metallic materials-Charpy notch impact test

GB/T 4338-1995 Metallic materials—Tensile testing at elevated temperature

GB/T 5677-1985 Methods of radiographic testing and classification of radiographs for steel castings

GB/T 6414-1999 Castings--System of dimensional tolerances and machining allowances

GB/T 9443-1988 Methods of liquid penetrant testing and classification of indication for steel castings

GB/T 11351-1989 Mass tolerances for castings



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