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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 5000.5-2007

Replace JB/T 5000.5-1998

**Heavy mechanical general techniques and
standards—Part 5: Non-ferrous casting**

**重型机械通用技术条件
第 5 部分：有色金属铸件**

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Foreword

JB/T5000 Heavy Mechanical General Techniques and Standards is divided into 15 parts:

- ___ Part one: Product Inspection
- ___ Part two: Fire-cutting
- ___ Part three: Welding parts
- ___ Part four: Iron casting
- ___ Part five: Cast nonferrous metal
- ___ Part six: Cast steel
- ___ Part seven: Cast Steel repair welding
- ___ Part eight: Forging
- ___ Part nine: Cutting
- ___ Part ten: Assembly
- ___ Part eleven: Tubing
- ___ Part twelve: Painting
- ___ Part thirteen: Packing
- ___ Part fourteen: Cast steel nondestructive examination
- ___ Part fifteen: Forging steel nondestructive examination

This part is the fifth part of JB/T5000.

This part takes the place of JB/T5000.15-1998 Heavy Mechanical General Technique and Standard: Non-ferrous casting.

Comparing with JB/T5000.15-1998, the main differences are as follows:

___ in table 1, basic dimensions of raw casting ≤ 10 , $>10\sim 16$, and $16\sim 25$ is combined to ≤ 25 ; And tolerance lever is modified from CT10 to CT9 in the frame of black line.

___ 3.3 is modified to “unless otherwise stated, shifts must be in the range of tolerance stated in the table 1 (see figure 4). If shift is need to be limited fatherly, maximal shift value must be indicated in the sample drawing.”

___ 5.3.3 “shape and dimension of sing-cast sample of zinc alloy casting must be fit for the requirement of GB/T1175-1997 is added

___ 5.7 “testing of performance of tensile per GB/T228” is added

___ 5.8 “testing of hardness per GB/T228” is added

___ 5.9 “testing of hardness and testing of performance of tensile are conducted at the same time, and the method of acceptance are also same. If only dext of hardness is not qualified, generally, the casting must be not deemed as defect, unless otherwise stated in the drawing of casting or some other document by user.” is added.

___ 6.1.2 “position of mark, dimension and method must be discussed by the supplier and demander, but the quality of casting must be paid attention that not damaged.”

___ 6.2 package “package of casting must according to the requirement of JB/T5000.13” is added.

This part is raised by China Machinery Industry Federation.

This part is centralized management by the Engineering Industry Metallurgical Equipment Technical Committee for Standardization.

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This part's previous edition:

—JB/T 5000.15—1998

Heavy mechanical general techniques and standards

— Part 5: Non-ferrous casting

1 Scope

This part of JB/T5000 specifies the techniques and standards, acceptance testing, rules of acceptance, mark and certificate of non-ferrous casting.

This part is applicable to copper alloy, aluminum alloy, zinc alloy castings of sand type, metal type and produced by centrifugal casting for heavy machinery.

2 Normative reference

Items in the following documents, which are quoted by this part of JB/T5000, become items of this part. Any quoted documents if they are dated, the following modify notification (not including the errata contents) or modify edition are not apply to this part. But, each part who reaches agreement according to this part will be encouraged to make studies on using these latest versions. Any latest edition of undated quoted documents can apply to this part

GB/T 228 metal materials method for tensile testing in room temperature (GB/T 228-2002, eqv ISO 6892:1998 (E)

GB/T 231.1 metal Brinell hardness testing Part 1: method of testing (GB/T 231.1-2002, eqv ISO 6506-1; 1999(E)

JB/T 1173 casting aluminum alloy

JB/T 1175 casting aluminum alloy (GB/T 1176, neq ISO 1338:1977)

JB/T 6060.1 comparing testing block for roughness of surface surface of casting (GB/T 6060.1 —1997, eqv ISO 2632-3; 1979)

JB/T 6414 casting dimensional tolerance and mechanical machining allowance (GB/T 6414-1999, eqv ISO 8062:1994)

JB/T 5000.13 general technique and standard for heavy machinery part 13: package

3 Techniques and standards

3.1 Chemical components and mechanical property

3.1.1 Chemical components and mechanical property of aluminum alloy casting must according to the requirement of GB/T 1173.

3.1.2 Chemical components and mechanical property of zinc alloy casting must according to the requirement of GB/T 1175.

3.1.3 Chemical components and mechanical property of copper alloy casting must according to the requirement of GB/T 1176.

3.1.3.1 For copper alloy castings which absorb heavy load, and are used on key positions, such as turbo, rim, screw box and whose maximal dimension is more than 500mm, chemical property must be taken as the main basis of acceptance. Small deviation of chemical components is permitted. Permitted deviation is 10% of maximal and minimal limitation.

3.1.3.2 For copper alloy castings which absorb light load, and are used on general positions, such as bush, bearing pad and slider whose maximal dimension is not more than 500mm, both



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