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

YC/T 10.5-1993

Replacing YC/T 10.5-2006

**Tobacco machinery. General requirements - Part 5: Spheroidal
graphite iron castings
(English Translation)**

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Foreword

YC/T 10 "General Technical Conditions for Tobacco Machinery" is divided into 16 parts.

- Part 1. Cutting parts;
- Part 2. Cold work;
- Part 3. Welded parts;
- Part 4. Gray cast iron parts;
- Part 5. Ductile iron castings;
- Part 6. Cast carbon steel parts;
- Part 7. Copper alloy castings;
- Part 8. Aluminum alloy castings;
- Part 9. Forgings;
- Part 10. Metal plating and chemical treatment;
- Part 11. Painting;
- Part 12. Assembly;
- Part 13. Packaging;
- Part 14. Electrical control systems;
- Part 15. Electrical control system assembly;
- Part 16. Polished and brushed stainless steel parts.

This part is the fifth part of YC/T 10.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces YC/T 10.5-2006 "General Technical Conditions for Tobacco Machinery Part 5. Ductile Iron Parts", and YC/T 10.5-Compared with 2006, the main technical changes

except editorial changes are as follows.

--- Revised the "preferred casting grade and mechanical properties of single casting test block" requirements (see Table 1, Table 1 of the 2006 edition);

--- Modified the dimensional tolerance class requirements on the casting drawings (see 3.3, 3.3 of 2006).

This part is proposed by the National Tobacco Monopoly Bureau.

This part is under the jurisdiction of the National Tobacco Standardization Technical Committee Smoke Machine Subcommittee (SAC/TC144/SC3).

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1 Scope

This part of YC/T 10 specifies the technical requirements, test methods and inspections of tobacco mechanical ductile iron castings (hereinafter referred to as castings).

rule.

This section applies to ordinary and low-alloy ductile iron castings of sand machinery (or thermal conductivity and sand type equivalent). Special the ductile iron parts of the casting method can be referred to.

This section does not apply to ductile iron pipe fittings and continuously cast ductile iron parts.

2 Normative references

The following documents are indispensable for the application of this document. 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/T 228.1 tensile testing of metallic materials - Part 1 GB/T 1348-2009 Ductile iron castings GB/T 6060.1-1997 Surface roughness comparison specimen casting surface GB/T 6414-2017 Casting dimensional tolerances, geometric tolerances and machining allowances JB/T 5105 casting moulding draft

3 General requirements

3.1

The grade and mechanical properties of the castings shall comply with the provisions of Chapter 4 of GB/T 1348-2009, among which the preferred casting grades and the mechanical properties of the single-cast test block are shown in Table 1.

Table 1 Preferred casting grades and mechanical properties of single-cast test blocks

Brand

Tensile strength Rm/MPa(min)	Yield strength Rp0.2/MPa(min)	Elongation A	Brinell hardness HBW	Major metallographic organization
QT400-18	QT400-15	QT450-10	18	120~175
15	120~180	10	160~210	Ferrite
QT500-7	500	320	7	170~230
Ferrite pearlite	QT600-3	600	370	3
190~270	Ferrite pearlite	QT700-2	700	420
2	225~305	Pearlite	QT800-2	800
480	2	245~335	Pearlite or tempered tissue	QT900-2
900	600	2	280~360	tempered martensite or troostite

Note 1: The values listed in "Yield Strength" and "Elongation" are the minimum values.

Note 2: The values listed in "Brinell Hardness" and "Main Metallographic Structure" are for reference.