

ICS 25.120.30

CCS J 61



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

GB/T 23576-2024

Replacing GB/T 23576-2009

Abrasive blasting equipment - General technical specifications

抛喷丸设备 通用技术规范

Issued on: August 23, 2024

Implemented on: August 23, 2024

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting is required. This document replaces GB/T 23576-2009 "General Technical Requirements for Shot Peening Equipment". Compared with GB/T 23576-2009, In addition to structural adjustments and editorial changes, the main technical changes are as follows: Added a chapter on "Terms and Definitions" (see Chapter 3);

a) Added "processing, assembly and appearance quality" requirements (see 4.2);

b) The requirements for "Electrical System" have been changed and the provisions for CNC system have been added (see 4.10,

3.1.2 of the.2009 edition);

c) The provisions on "cleanliness of the inside of oil and gas cylinders" (see

3.1.12 of the.2009 edition) have been deleted, and the provisions on "cleanliness of the inside of hydraulic and pneumatic systems" have been added. "System" provisions (see 4.11.3, 4.11.4);

d) Added "Safety Requirements" (see 4.12);

e) Changed the relevant provisions of "No-load test requirements" and "Load test requirements" (see 4.13, 4.14,.2009 edition) 3.9);

f) Added the requirements for purchased accessories and preparation (see 4.1 5.2), and changed the requirements for "random technical documents" (see 4.15.3,

3.1.19 of the.2009 edition);

g) The "Determination of cleanliness" (see

4.3 of the.2009 edition) was deleted, and the "Determination of hardness difference of each set of blades" and "Idle run test" were added. "Test" and "Load operation test" (see 5.4, 5.7, 5.8);

h) Added requirements for machine labels (see 7.2, 7.3, 7.4) and requirements for machine storage (see 7.9);

1 Scope

China's national general technical specification for shot blasting and shot peening

equipment. It specifies the classification, the technical requirements, the test methods, the inspection rules and the marking, packaging, transport and storage of wheel blast and air blast machines. These machines throw abrasive at a surface, either by a spinning wheel or by compressed air, and they do two quite different jobs that the standard has to cover together. The first is cleaning: removing scale, rust, sand and old coating from castings, structural steel, plate and pipe, which is what prepares a surface for painting and is the largest use by volume. The second is peening, which is not cleaning at all - the shot is thrown at a controlled intensity to plastically deform the surface layer and leave it in residual compression, and a compressed surface resists fatigue cracking because a crack cannot open under compression. Springs, gears, shafts, connecting rods and aircraft components are peened for that reason, and the intensity has to be controlled and verified rather than merely applied. So the requirements divide accordingly: the throwing wheel or nozzle and its performance, the abrasive circulation and separation system, which is what keeps the working mix at the right size distribution as shot breaks down, the cabinet and its wear protection, the dust collection - because blasting generates a large volume of fine dust that is both a health hazard and, with some substrates, explosible - the workpiece handling, and the controls. The safety requirements are extensive: a blast machine is a sealed enclosure containing a lethal environment while it runs, and the interlocks that prevent it being opened are the critical safety function. Issued and in force since 23 August 2024, it replaces GB/T 23576-2009.

This document specifies the technical requirements for shot peening equipment, describes the corresponding test methods, and specifies the inspection rules, marking, packaging, transportation, etc. Transport and storage. This document applies to the manufacture of shot peening equipment.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies. in this document.

GB/T 150 (all parts) Pressure vessels

GB/T 191 Pictorial markings for packaging, storage and transportation

GB/T 230.1 Rockwell hardness test for metallic materials Part