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

GB 12899-2018

Replacing GB 12899-2003

General specifications for hand-held metal detectors

手持式金属探测器通用技术规范

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Foreword

The full technical content of this standard is mandatory. This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB 12899-2003 "General Technical Specifications for Handheld Metal Detectors". Compared with GB 12899-2003, mainly The technical changes are as follows:

- Revised the normative reference document (see Chapter 2, Chapter 2 of the.2003 edition);
- Added the definition of "probe" (see 3.5);
- Added the definition of "probing axis" (see 3.6);
- Modified the definition of "detection base" (see 3.7, 3.6 of the.2003 edition);
- Change the "test plane" to "probe plane" and change the definition (see 3.8, 3.5 of the.2003 edition);
- Modified the definition of "probing distance" (see 3.9, 3.7 of the.2003 edition);
- Change the "detection method" to "detection mode" and change the definition (see 3.10, 3.8 of the.2003 edition);
- Change the "detection level" to "probe level" and change the definition (see 3.11,.2003 version 3.9);
- Added the definition of "test substance" (see 3.12);

1 Scope

China's mandatory specification for hand-held metal detectors - the wands used at airport and station security, at courthouse and prison entrances and at public events to find metal weapons and metal contraband on a person. The standard specifies the technical requirements, the test methods, the inspection rules, the marking and labelling, the packaging and the accompanying documentation of hand-held metal detectors, and it is the basis on which such equipment is designed, manufactured, inspected and used; detectors for other purposes may apply it by reference. What the standard has to pin down is a performance that is otherwise entirely subjective. A wand that is too insensitive misses a blade; one that is too sensitive alarms on a belt buckle and, after an hour, is turned down or ignored by the operator. The requirements therefore fix the detection sensitivity against defined test pieces at defined distances, the uniformity of the detection field along the head so that there is no blind spot, the discrimination between ferrous and non-ferrous metal, the indication given to the operator, the response time and the behaviour when several targets are present. Around that sits the equipment itself: the power supply and battery endurance, the enclosure protection to GB/T 4208-2017, the electrical safety of GB 4793.1-2007, the general instrument requirements of GB/T 6587-2012, the environmental programme of the GB/T 2423 series with low and high temperature, damp heat, impact, free fall and sinusoidal vibration, and the electromagnetic compatibility of the GB/T 17626 series - because a detector that fails in the rain, or in the field of the archway metal detector next to it, is not a detector. Issued on 19 November 2018 and in force since 1 December 2019, it replaces GB 12899-2003.

This standard specifies the technical requirements, test methods, inspection rules, marking, marking, labeling and packaging of hand-held metal detectors, random techniques. Documentation, etc. This standard applies to hand-held metal detectors for the inspection of metal weapons and metal contraband. It is the design, manufacture, inspection and use of such equipment. The basic basis for preparation. Handheld metal detectors for other purposes can be referred to.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 2423.1-2008 Environmental testing of electric and electronic products - Part 2. Test methods Test A. Low temperature

GB/T 2423.2-2008 Environmental testing of electric and electronic products - Part 2. Test methods Test B. High temperature

GB/T 2423.3-2016 Environmental testing - Part 2. Test method test Cab. constant damp heat test

GB/T 2423.5-1995 Environmental testing for electric and electronic products - Part 2. Test methods Test Ea and guide. Impact

GB/T 2423.8-1995 Environmental testing for electric and electronic products - Part 2. Test method test Ed. Free fall

GB/T 2423.10-2008 Environmental testing for electric and electronic products - Part 2. Test method test Fc. Vibration (sinusoidal)

GB/T 4208-2017 enclosure protection grade (IP code)

GB 4793.1-2007 Safety requirements for electrical equipment for measurement, control and laboratory - Part 1. General requirements

GB/T 6587-2012 General specification for electronic measuring instruments

GB/T 17626.2-2006 Electromagnetic compatibility test and measurement technology Electrostatic discharge immunity test

GB/T 17626.3-2016 Electromagnetic compatibility test and measurement technology RF electromagnetic field radiation immunity test

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Handheld metal detector hand-heldmetaldetector A hand-held metal detecting device. The device can detect hidden metal items that exceed a defined amount.

3.2 Alarm positivealarm When a metal object is reached or exceeded, the hand-held metal detector emits an alarm signal with a specified display and sound.

3.3 Leak alarm alarmfailure The hand-held metal detector has no alarm for metal objects that meet or exceed a defined amount.

3.4 False alarm falsealarm The hand-held metal detector erroneously alerts the item that has not been tested or that there is no alarm.